



Final Environmental Assessment

For the

TABLE MOUNTAIN Wind Energy Study

MAY 1984



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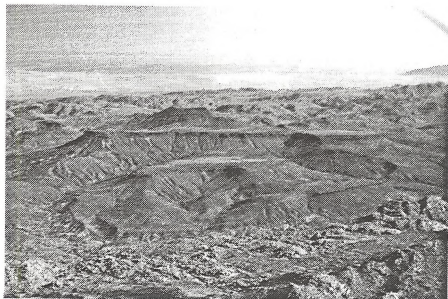
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FINAL
ENVIRONMENTAL ASSESSMENT
FOR THE
TABLE MOUNTAIN STUDY AREA
WIND ENERGY DEVELOPMENT

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prepared by

UNITED STATES DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
EL CENTRO RESOURCE AREA



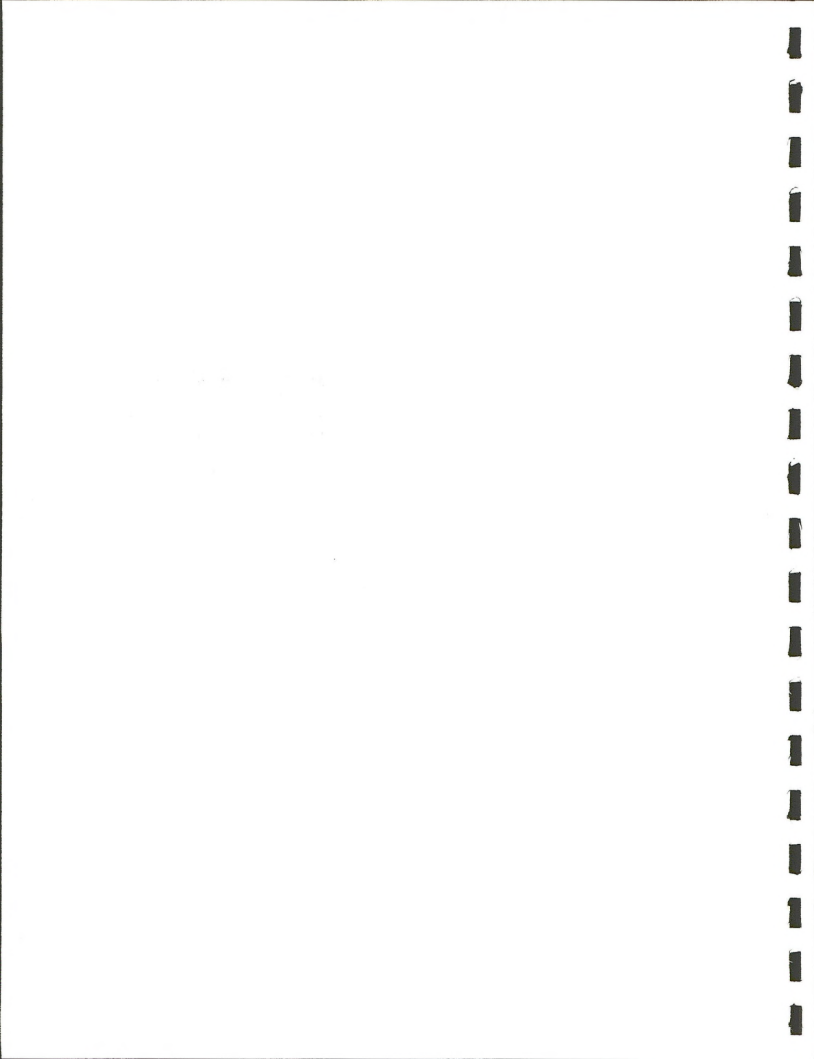


TABLE OF CONTENTS

	<u>Page</u>
I. <u>INTRODUCTION AND DESCRIPTION OF ALTERNATIVES</u>	
A. <u>Introduction</u>	1
Purpose and Need	1
Management Goals and Objectives	1
Issue Identification	1
Study Area	5
Background	5
Permitting Procedures	6
B. <u>Alternatives</u>	8
Alternative 1: Full Development	8
Alternative 2: No Action	8
II. <u>AFFECTED ENVIRONMENT</u>	9
A. <u>Land Use</u>	9
Recreation	9
Minerals	9
Power Transmission Corridor	10
Range (Grazing)	11
Communication Sites	11
Wilderness	11
B. <u>Visual Resources</u>	14
C. <u>Biological Resources</u>	17
Vegetation	17
Wildlife	18
D. <u>Cultural Resources</u>	33
III. <u>IMPACTS</u>	49
A. <u>Land Use</u>	49
Recreation	49
Minerals	50
Power Transmission Corridor	50
Range	50
Communication Sites	51
Wilderness	52
B. <u>Visual Resources</u>	52

	<u>Page</u>
C. <u>Biological Resources</u>	53
Vegetation	53
Wildlife	55
D. <u>Cultural Resources</u>	57
IV. <u>MITIGATION MEASURES</u>	66
A. <u>Land Use</u>	66
Recreation	66
Minerals	66
Power Transmission Corridor	66
Range	66
Communication Sites	66
Wilderness	67
B. <u>Visual Resources</u>	67
C. <u>Biological Resources</u>	69
Vegetation	69
Wildlife	69
D. <u>Cultural Resources</u>	70
V. <u>UNAVOIDABLE ADVERSE IMPACTS</u>	76
Recreation	76
Range	76
Wilderness	76
Visual Resources	76
Vegetation	76
Wildlife	77
Cultural Resources	77
VI. <u>CONSULTATION AND COORDINATION</u>	78
VII. <u>PARTICIPATING STAFF</u>	169
VIII. <u>REFERENCES CITED</u>	170
IX. <u>APPENDICES</u>	175
Appendix A: BLM's VRM System	176
Appendix B: California Native Plant Society R-E-V-D Codes	181
Appendix C: Native American Notification letter	183

LIST OF TABLES

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Average wind speeds, prevailing wind direction, and number of days with data for the period of June through December, 1982.	7
2	Mining Claim Locations	10
3	Obvious and Common Plants	20
4	Plant Species of Interest	22
5	Wildlife Species Diversity in the Study Area According to Habitat Type	24
6	Wildlife Species of Special Significance	26
7	Existing Archaeological Data from Table Mountain Depicted by Site Type	36
8	Statistical Site Density Estimates (per square mile) for the Vallecito-Canebrake, McCain Valley, and Table Mountain Areas (after Cook and Fulmer 1980).	38
9	Summary of Excavated, Subsurface Data from the Table Mountain Study Area	39
10	Species Vulnerability	

LIST OF MAPS

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Regional Location Map	2
2	Existing Land Uses	4
3	Wilderness	12
4	Visual Resources	15
5	Areas of Botanical Concern	19
6	Wildlife	31
7	Location of Archaeological Surveys within Table Mountain Study Area	34
8	Location of Designated ACEC and National Register Districts within Table Mountain Study Area	42
9	Management Framework Plan Decisions Designed to Protect and Enhance Table Mountain ACEC	43
10	Archaeological Conflict Identification within Table Mountain Study (Levels Defined in Text Under Existing Environment	61
11	Visually Acceptable Activities	68
12	Native American Conflict Identification within Table Mountain Study Area (Levels Defined in Text under Existing Environment)	72

I. INTRODUCTION AND DESCRIPTION OF ALTERNATIVES

A. Introduction

This environmental assessment (EA) is being prepared in response to interest expressed by private developers to utilize public lands within the Table Mountain Study Area (see Map 1) for development of wind energy systems.

This document is the first part of a two phase environmental review process required by the National Environmental Policy Act of 1969. No applications are being analyzed in this document. The purpose of this EA is to generically analyze impacts that will occur and to identify zones suitable for wind energy development. This document also presents means of mitigating impacts resulting from development. Site-specific EAs on plans of development will be prepared if rights-of-way are granted. The site-specific document will be prepared by the grantee and will be subject to review and approval by BLM.

Purpose and Need

The purpose of the wind energy project evolves from a National and State need to develop alternative energy sources. Large-scale harvest of wind energy is feasible from a technical standpoint and the power source is non-polluting and renewable. The proposed development of wind energy resources for electrical generation would serve the following purposes: help meet, in part, the need for increased power supplies in the early 1990's; reduce dependence on oil consumption for generating electricity consumed in the San Diego Gas and Electric (SDG&E) service territories; furnish access to the economic-energy market; and enhance system flexibility and diversify energy sources.

Management Goals and Objectives

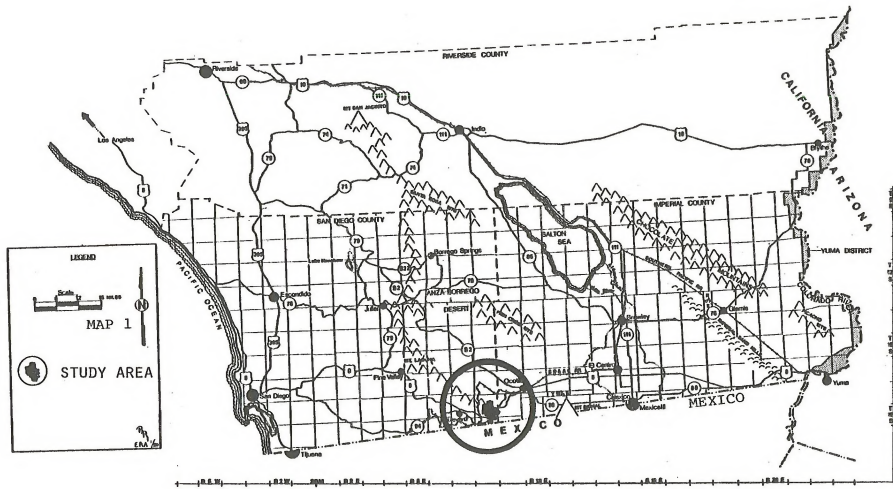
It is the policy of the Bureau of Land Management to provide Federal land for the exploration, production, and utilization of their energy resources in an environmentally compatible manner. This would be accomplished under the principles and procedures of 43 CFR, Part 2800 pursuant to the Federal Land Policy and Management Act of 1976. This policy provides for 1) orderly and timely resource development; 2) protection of the environment; and 3) receipt of fair market value for disposition of the public resources.

Issue Identification

The major issues associated with granting rights-of-way for wind energy development in the Table Mountain Study Area are possible impacts to: 1) wildlife, especially rare, endangered or sensitive species; 2) wilderness; 3) visual resources; 4) archaeological resources; and 5) Native American concerns. Discussions concerning existing land

REGIONAL LOCATION MAP

TABLE MOUNTAIN WIND ENERGY STUDY AREA



uses (i.e., rare to endangered plant species, recreation, mining, and communication sites) are also included in this document.

Approximately 3,960 acres of the study area are included in an Area of Critical Environmental Concern (ACEC) designated by the Eastern San Diego County Management Framework Plan (1981) in recognition of the area's outstanding cultural values (see Map 10). Evidence of prehistoric occupation of the area is extensive and highly concentrated. The Table Mountain Archaeological District, located in the northern portion of the study area and within the ACEC, is listed on the National Register of Historic Places. The Jacumba Discontiguous District, in the southern portion of the study area, has been evaluated and determined eligible for inclusion on the Register. For further discussion see page 33.

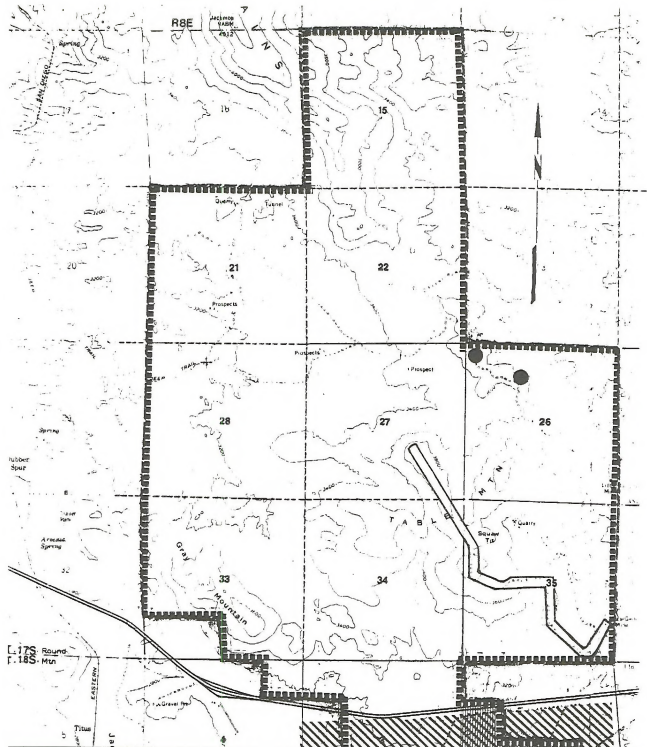
Most of the study area is encumbered by the Jacumba National Cooperative Land and Wildlife Management Area (see Map 2). These lands were withdrawn by Public Land Order 2693 of June 7, 1962. This designation provides for management in cooperation with the California Department of Fish and Game for the appropriate development, conservation, utilization, and maintenance of the lands and their resources. This withdrawal does not preclude issuance of rights-of-way.

Other designations within the study area are the Table Mountain Wilderness Study Area (CA-060-26) and a major utility corridor (an extension of Corridor N described in the California Desert Conservation Area Plan, 1980).

SDG&E currently has no suitable transmission lines into this area. The necessary transmission lines to interconnect specific wind generators with the SDG&E system could be lengthy. It is neither economically feasible nor operationally prudent to interconnect with the Southwest Powerlink (500 kV) which is shown passing through the study area (Map 2).

A Call for Applications was published in the Federal Register April 8, 1983. This was to determine the extent of interest in the Table Mountain area. An environmental document was to be prepared subsequently by BLM (funded by the applicant). Two applications were accepted. CA-13973 was rejected for failure to submit additional information and money for preparation of an EA. The applicant has appealed that decision. The case is pending a ruling by the Interior Board of Land Appeals (IBLA). No further actions can be made in regards to this area until IBLA renders their decision. CA-13080 wishes to expand their application area. Further action is pending results of this document.

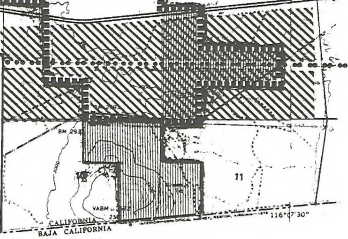
This EA is a comprehensive analysis of the resource values and impacts. BLM will use the resultant final document as the primary tool for making determinations in the following three areas:



MAP 2

**TABLE MOUNTAIN WIND ENERGY
STUDY AREA
Existing Land Uses**

- Communication Sites
- ▣ Jacumba Nat'l. Cooperative Land and Wildlife Management Area
R/W Application CA-13973
- ▤ Utility Corridor
- 500 kV Transmission Line
R/W Application CA-13080



- 1) The sensitivity of the study area environment to wind energy development intrusion; and
- 2) The need for further study through the more extensive address of an environmental statement (ES); or
- 3) If wind energy rights-of-way should be granted, under what conditions grants shall be allowed. This process may involve eliminating or constraining development in areas which have overriding resource values.

Study Area

The study area contains approximately 6600 acres and is located in southeastern San Diego County in the southern portion of the Jacumba Mountains (see location map), with Carrizo Gorge on the west and Devil's Canyon on the east. The land is bordered on the west, north and east by Anza-Borrego Desert State Park and private lands, and on the south by the U.S./Mexico International Border. The study area boundaries reflect the large block of BLM administered lands in the Table Mountain locale.

The land lies on the west slope of the Jacumba Mountains, varying in elevation from 2900 to 4200 feet above sea level. The terrain generally slopes from Table Mountain, a small mesa in the middle of the study area. The area surrounding Table Mountain consists mainly of a rolling rocky valley area. Interspersed throughout the area are rocky ridges and peaks.

Background

The California Energy Commission's (CEC) Wind Program was initiated in 1977 and later expanded by the passage in 1978 of California Assembly Bill 2976 authored by Assemblyman Henry Mello. The Mello Bill requires CEC to implement a state wide wind energy program that expedites the commercialization of utility scale wind turbines. One specific CEC responsibility under the Mello Bill is to initiate an assessment of wind resources throughout California.

The goal of the CEC Wind Program is to produce ten percent of the State's electricity from wind energy by the year 2000. This would currently correspond to about 7,700 megawatts of installed capacity and would result in a savings of 40 million barrels of oil each year.

Wind energy conversion systems need to be located in areas with strong and persistent winds for cost-effective electrical production because the total amount of power in the wind increases with the cube of the wind speed. A good site should have an estimated mean annual wind speed of at least 12 miles per hour measured at 33 feet above the ground. Wind speed will typically increase with height as ground friction and the turbulence caused by surface obstructions are reduced.

Preliminary results of an ongoing CEC sponsored wind resource study for San Diego County indicate the Table Mountain area has a high potential for wind generated electrical power (Wind Prospecting in San Diego County, California, August 1983).

For the purpose of this study, 18 sites in San Diego County were selected by Meteorological Research, Inc. (MRI) for a one year monitoring of wind speed and direction. Table 1 lists the average wind speeds, prevailing wind directions, and number of days with wind speed data for the 18 sites during the first seven months of data collection. An average wind speed of over 15 mph ranks the Table Mountain Area as one of the top three sites in San Diego County for economic wind energy development. The other two sites are Laguna Mountain and Julian.

It should be noted that for the purpose of MRI's report only one anemometer was placed within the Table Mountain Study area. The anemometer was located at the northern most communication site shown on Map 2. The reading may not be consistent throughout the area. Other sites in close proximity are: Circle 2 Ranch; Boulder Park; and Jacumba.

Permitting Procedures

Following the approval of the Record of Decision attached to this document, competitive bidding for development rights on the approved parcels will be conducted. This auction will be announced in regional papers shortly after publication of the final decision. Only those approved parcels presently unencumbered by applications would be available. Conditional rights-of-way grants will be issued to successful bidders, with the caveat that further site-specific EAs may place additional constraints or mitigations on development. The successful bidders will be required to submit a plan of development within twelve months and to prepare a site-specific EA on their plan of development. The plan of development/EA will address areas of permanent and temporary disturbance, and location of turbines, roads, and transmission lines.

The document will also identify site-specific mitigations. Upon BLM review and approval, a Notice to Proceed will be issued.

Each right-of-way grant is conditioned upon payment of specified royalties and rentals to the United States. The amount of these royalties will be fixed by the Secretary of Interior in advance of offering the grant. Each grant must also provide for payment of an annual rental, payable at the beginning of each year. Each grant must contain provisions to protect the interest of the United States, to safeguard

TABLE 1 (Taken from California Energy Commission, 1983)

Average wind speeds, prevailing wind direction, and number of days with data at the 18 wind monitoring locations for the period of June through December, 1982

Site Number/ Station	WIND SPEED								PREVAILING WIND DIRECTION								NO. OF DAYS WITH DATA							
	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PER100	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JUN	JUL	AUG	SEP	OCT	NOV	DEC	PER100	%
1. Circle 2 Ranch	-	8.8	5.5*	10.2	9.1	10.0	11.0	9.5																114
										SW	-	-		NNE	W									165
										W	WNW	W	WNW	WNW	WNW	WNW	WNW							210
3. Banner Canyon	7.9	6.2	5.3	6.2	6.2	5.8	5.6	6.2	WNW	WNW	W	WNW	WNW	WNW	WNW	WNW								210
										WSW	NE	WSW	W	NE	NE	NE	NE							149
4. Lake Riverside	7.0	8.1	8.3	8.1*	9.5	-	9.7	8.4	WSW	NE	WSW	W	NE	NE	NE	NE								211
									W	WNW	W	W	NE	NNE	NNE	NE								185
5. Descanso	4.7	6.1	6.9*	7.3	9.1	9.8	10.0	7.9	WNW	W	NE	SW	SW	N	NE	NE								206
										WSW	ENE	WSW	WSW	ENE	WSW	ENE								165
6. Mt. Laguna	-	10.5*	12.0	16.2	17.6	19.0	17.7	15.8	-			SW	SW	WSW	ENE	WSW	ENE							193
												SW	SW	NNE	SW	SW								190
7. Table Mtn.	23.4	18.4	14.0	18.2	18.6*	20.4	16.1	18.2	SW	SW	SSW	SW	SW	SW	SSW	SSW								210
									SSW					N	NNE	NNE	N							174
8. Rainbow	5.5	5.1	5.1	6.1	6.5	7.7	7.5	6.1	SW	SW	SSW	SSW	SSW	SW	NNE	SSW								212
										SSW	SW	SSW	SSW	SW	SSW	SSW								140
9. Julian	20.0	17.9	13.3	15.0	14.4	14.3	12.7	15.7	SSW	SW	SSW	SSW	SW	SSW	SSW	SW								205
														W	WSW									211
10. Butterfield Rn	10.2	8.0	6.3	7.1	6.0	5.4	4.6	6.8	WNW	W	W	W	W											211
														ENE	ESE	WNW	E							209
11. Palomar	6.0	4.6	4.6	6.2	6.9	8.8	8.8	6.6	WNW	WNW	V	V			WSW	WNW								210
														W										154
12. Ranchita	13.9	10.0	10.4	10.2	8.7	8.5	7.7	10.0	W	W	W	W	W	ENE	WSW	N								211
										S	S			SSW										175
13. Boulder Park	29.3	16.2	17.0	21.2	14.8	16.9	13.4	17.7	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW								210
														WNW	WNW	WNW								211
14. Borrego	13.1	9.9	8.6	10.0	8.6	7.1	6.9	9.2	WNW	WNW	WNW	WNW	WNW	NW	NW	NW								211
										WSW	SW	WSW	-	NE	SW	SSW								163
15. Tecate Divide	10.7	7.8	8.5	11.0	11.4	13.8	11.9	11.2	WSW	SW	WSW	-	NE	SW	NNE	SW								205
									SW					NNE										172
17. Sycamore Flats	4.5	5.8	4.4	5.1	5.7	5.5	5.2	5.1	SSW	SW	SW	SSW	SSW	NE	NNE	NNE								202
														NE	NNE	NNE								190
18. Angel Mtn.	6.7	5.3	4.5	5.6	4.2	6.7	5.1	5.3	SSW	SSW	SSW	SSW	SSW	SSW	SSW	N								197
														SSW										183
19. Sugarloaf Mtn.	23.0	16.5	16.1*	-	10.7	10.8	8.1	13.2	WSW	WSW	WSW	SW	SSW	SW	SW	V								204
									SSW					SSW										140
20. Jacumba	8.3	6.1	5.0	6.5	5.5	6.8	4.5	6.2	SW	SW	V	S	NNE	S	N									190
																								140

TOTAL: 84.5

* Less than 50% data recovery

V Variable (less than 25% combined total from two highest directions)

the public welfare, and to insure exercise of care and diligence in the operation of the right-of-way. Failure to comply with the terms of the grant is a basis for termination.

A bond, based upon compliance with all conditions of the lease, may be required on grants issued.

B. Alternatives

Two alternatives will be considered: Full development and No Action (no development). The final decision may be a modified version of these alternatives. The decisions will identify those areas, if any, the Bureau considers are suitable for wind energy development. In either case of suitable or unsuitable determinations they will be based on the impact analysis presented in this EA. The decision document will provide the rationale for all actions taken.

Alternative #1/Full Development

All public land within the study area would be available for wind energy development.

This alternative will provide for surface access to all portions of the study area. The environmental impacts of such access would be reduced through environmental protection stipulations developed as mitigation measures in the subsequent site specific environmental reviews of required plans of operation.

Alternative #2/No Action

Under this alternative no wind energy development would be allowed. This action would continue to provide protection to all resource values.

II. AFFECTED ENVIRONMENT

A. Land Use

Recreation

Based on aerial visitor count data, the Table Mountain area receives approximately 3000 visitor use days (VUD's) of recreational use annually. Major recreational activities include sightseeing, rock collecting, off-road vehicle (ORV) use on approved routes, hunting, horseback riding, and hiking.

The Eastern San Diego County MFP rated the area's sightseeing opportunities as "moderate". Many visitors come to view the area's plant life, as a number of endemic species can be found here. Rock collecting is rated as "excellent" for garnets and clear beryl. ORV opportunities are rated as "moderate". Most ORV use consists of four-wheel drive or motorcycle touring, but opportunities are somewhat limited by the small size of the area. ORV use is limited to approved routes of travel.

Hunting opportunities for upland game (quail, dove, cottontail rabbit, jackrabbit) are rated as "moderate". Deer hunting also occurs, though hunter success is poor.

The area is occasionally used for horseback riding, hiking, and backpacking, and is rated as "moderate" for these activities. The BLM lands provide the primary hiking access to the higher portions of the Jacumba Mountains within Anza-Borrego Desert State Park, which surrounds the study area on the north, east, and west. A number of outdoor organizations have used the area to conduct orienteering and rock climbing training courses.

Minerals

The Table Mountain Study Area is composed of a fairly wide range of rock types. The oldest rocks in this area are the Mesozoic hybrid gneisses and associated granodiorites. These rocks have been intruded by Mesozoic granitic rocks which are part of the Southern California Batholith. In the area of Table Mountain, these granitic rocks are overlain by a Tertiary conglomeratic sandstone which is approximately 150 feet in observed thickness. This sedimentary unit has been intruded by Tertiary igneous rocks which now overlie the sandstone. The extrusive igneous rocks which overlie the sandstone are composed of 200 to 600 feet of alternating tuff and andesitic lavas. It is the combination of the Tertiary sandstone and protective andesitic lavas which give Table Mountain its elevation above the surrounding granitic exposures and create the planar surface on top of this prominence.

Currently, the study area is not encumbered by either geothermal or oil and gas leases or lease applications. The U.S.G.S. has classified the Jacumba-Table Mountain area as being prospectively valuable for geothermal resources based on several 95-96°F wells near Jacumba and the presence of Tertiary volcanics in the area. The geology within the study area, however, does not lend itself towards any oil and gas potential.

In terms of mining claims, the Bureau's November 8, 1983 microfiche records show a total of nine mining claims within the study area. The following table shows the general location and size of the areas currently covered by mining claims.

Table 2

<u>Location</u>	<u>CAMC</u>	<u>Claim type</u>	<u>Approximate claim area (size)</u>
<u>T. 17 S., R. 8 E., SBM</u>			
Sec. 21	85320-25(6)	lode	N½ (120 acres)
26	86338(1)	placer	SE½ (40 acres)
35	86336-86337 (2)	Association placer	E½ (320 acres)

No current activity, except for annual assessment work, is known for the above mining claims.

In terms of saleable mineral leases, the Bureau has issued one contract for volcanic cinders on ten acres in the N½ NW¼ of section 35, T. 17 S., R. 8 E., SBM. This location is shown on the Jacumba 7.5' quadrangle as a quarry site. Since the issuance of the contract on June 8, 1983, the operator has improved the access road to the quarry site but has not begun to remove commercial quantities of volcanic cinders.

Prior to this contract, the quarry was used intermittently as a source of volcanic cinders. First production from this site began in 1948 and continued through mid-1979. Production stopped in late 1979 and then the mining claims covering the site were declared abandoned and void by the Bureau in mid 1980 for failure to file an assessment work notice by December 30, 1979 for the 1979 assessment year.

Power Transmission Corridor

A 2-5 mile wide utility corridor crosses the southern portion of the study area. This corridor was established by the Eastern San Diego County Management Framework Plan as an extension of Corridor N described in the CDCA plan (see Map 2).

San Diego Gas and Electric (SDG&E) Company is currently constructing a 500 kV transmission line within the corridor. This line will interconnect with Arizona Public Service (APS).

Range (Grazing)

A large portion of the study area is grazed by livestock. All public land in the study area in T. 17 S., R. 8 E., is a part of the McCain Valley Allotment. Land to the south is not grazed by livestock.

The number of animals that can graze in this area is determined by the amount of forage available. The quantity of forage is measured in units called AUM's. One AUM is the amount required to feed one cow and her calf for one month. The grazing capacity for this area has been identified as 247 AUM's (USDI, 1981).

Grazing management is done under the guidance of the McCain Valley Allotment Management Plan (USDI, 1983). Although the study area has not been grazed in the last 7 years, use will be made on an annual basis in the future. The expected season of use will be from November through February, inclusive, although grazing may occur earlier or later than this if conditions so dictate. Important forage includes most ephemeral grasses and forbs, perennial grasses, and a small number of shrubs.

There are no range improvements currently in the study area. The Allotment Management Plan has prescribed the development of springs at unspecified locations in this region in the near future; fence construction along portions of the State Park boundary is also a possibility.

Communications Sites

Two communications sites are located on a ridge a short distance north of Table Mountain (see Map 2). The location is one of the few suitable for servicing Imperial County.

Wilderness

The former Table Mountain Wilderness Study Area (WSA) CA-060-026 (see Map 3) was recommended nonsuitable by the Eastern San Diego County MFP. The WSA was released from WSA status as a result of implementation of the Secretary of the Interior's Order and Instruction Memorandum 83-188, Change 1, dated December 30, 1982.

On September 8, 1983, the district court in Sierra Club et al vs. Watt et al. issued an order in the nature of a preliminary injunction. The order affects how those

lands deleted from wilderness study area status by the December 30, 1982, order of the Office of the Secretary are to be managed. The court ordered from the bench that until a final decision on the merits of the case issues, "the Secretary shall take no action concerning any of those lands removed from wilderness management by virtue of the Secretary's order of December 30, 1982, and Instruction Memorandum 83-188, Change 1, that could not have been taken or would have been prohibited in the absence of the Secretary's order and Instruction Memoranda". (The language of the court's written order may differ slightly from the foregoing.)

BLM Instruction Memorandum 84-11 implements the court's injunction. It directs that all lands deleted from WSA status by the previous Secretarial Order be managed according to the BLM Interim Management Policy and Guidelines for Lands Under Wilderness Review (IMP) until further notice. This means that the "nonimpairment criteria" of the IMP apply to the former Table Mountain WSA. Activities will be considered nonimpairing if the BLM determines that they meet each of the following criteria:

- a) It is temporary. This means that the use or activity may continue until the time when it must be terminated in order to meet the reclamation requirement of paragraphs b) and c) below. A temporary use that creates no new surface disturbance may continue unless Congress designates the area as wilderness, so long as it can easily and immediately be terminated at that time, if necessary to management of the area as wilderness.
- b) Any temporary impacts caused by the activity must, at a minimum, be capable of being reclaimed to a condition of being substantially unnoticeable in the wilderness study area (or inventory unit) as a whole by the time the Secretary of the Interior is scheduled to send his recommendations on that area to the President, and the operator will be required to reclaim the impacts to that standard by that date. If the wilderness study is postponed, the reclamation deadline will be extended accordingly. If the wilderness study is accelerated, the reclamation deadline will not be changed. A full schedule of wilderness studies will be developed by the Department upon completion of the intensive wilderness inventory. In the meantime, in areas not yet scheduled for wilderness study, the reclamation will be scheduled for completion within 4 years after approval of the activity. The Secretary's schedule for transmitting his recommendations to the President will not be changed as a result of any unexpected inability to complete the reclamation by the specified

date, and such inability will not constrain the Secretary's recommendation with respect to the area's suitability or unsuitability for preservation as wilderness.

The reclamation will, to the extent practicable, be done while the activity is in progress. Reclamation will include the contouring of the topography to a natural appearance (not necessarily to the original contour), the replacement of topsoil, and the restoration of plant cover at least to the point where natural succession is occurring. Plant cover will be restored by means of reseeding or replanting, using species previously occurring in the area. If necessary, irrigation will be required. The reclamation will be complete, and the impacts will be substantially unnoticeable in the area as a whole, by the time the Secretary is scheduled to send his recommendations to the President.

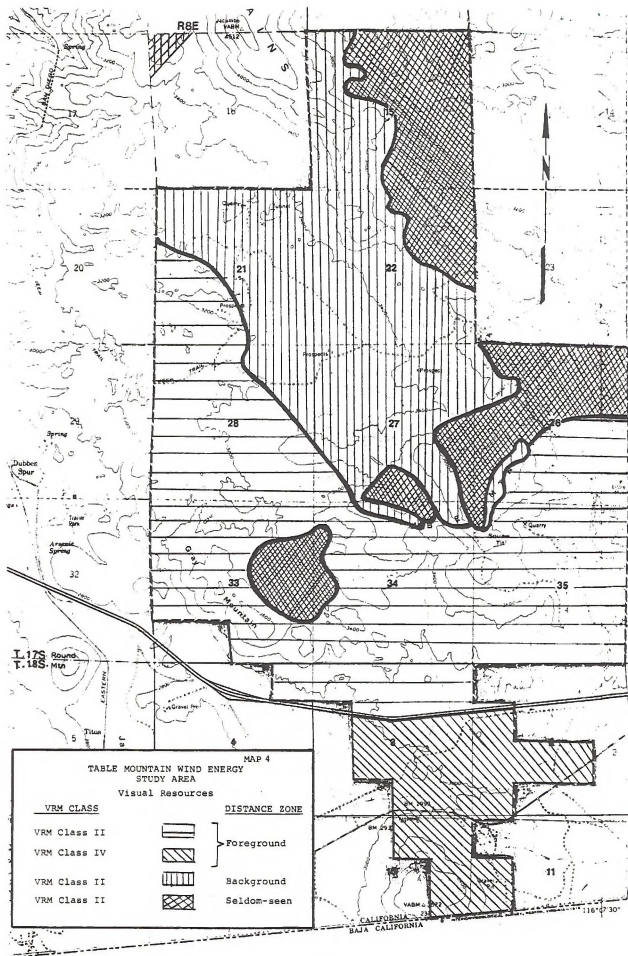
- c) When the activity is terminated, and after any needed reclamation is complete, the area's wilderness values must not have been degraded so far, compared with the area's values for other purposes, as to significantly constrain the Secretary's recommendation with respect to the area's suitability or unsuitability for preservation as wilderness. The wilderness values to be considered are those mentioned in section 2(c) of the Wilderness Act, including naturalness, outstanding opportunities for solitude or for primitive and unconfined recreation, and ecological, geological or other features of scientific, educational, scenic, or historical value.

B. Visual Resources

Note: The reader may find it helpful to study Appendix A, "The Bureau of Land Management's Visual Resource Management System", before reading this section.

The Inventory/Evaluation portion of the Visual Resource Management (VRM) program for Table Mountain was completed through the planning process which led to completion of the Eastern San Diego County Management Framework Plan (MFP) in 1980. BLM landscape architects conducted a scenic quality field inventory, evaluated the area's visual sensitivity, and determined user volume based on nearby highway traffic levels.

Based on the Table Mountain rating unit's good (Class B) scenic quality, moderate to high visual sensitivity, and the high volume of use on the adjacent interstate highway, the MFP assigned the portion of the rating unit north of Interstate Highway 8 to VRM Class II (see Map 4). In



MAP 4
 TABLE MOUNTAIN WIND ENERGY
 STUDY AREA
 Visual Resources

VRM CLASS		DISTANCE ZONE
VRM Class II		Foreground
VRM Class IV		
VRM Class II		Background
VRM Class II		Seldom-seen

this class, changes in form, line, color and texture of the landscape caused by land-use activity should not be evident. Contrasts resulting from land uses may be seen but should not attract attention.

The rating unit south of Interstate 8 was assigned to VRM Class IV. In this class, visual contrasts may attract attention and be a dominant feature of the landscape in terms of scale; however, the changes should repeat the basic elements (form, line, color, texture) inherent in the characteristic landscape. This area was rated Class IV because it possesses generally lower scenic quality and more cultural intrusions than the area north of the freeway, and because it is situated within a utility corridor.

The study area is located within the Southwest Mountain and Valley Landscape Province. The existing landform consists of rolling hills and small mountains with rounded tops, dominated by a large flat-topped mesa (Table Mountain). Numerous granitic boulder piles flank the mesa on the west. Predominant lines are formed by the rounded tops of hills, the horizontal mesa top, and the irregular edges of the boulder formations. Overall landform color is tan. Texture ranges from coarse to fine.

Vegetation cover consists mainly of low rounded shrubs which pepper the hillsides. Some narrow, indefinite lines of vegetation having feathered edges are oriented along drainages. Color ranges from dark green to gray green to yellow green, with occasional colorful seasonal wildflower carpets. Vegetation texture is coarse to fine.

Man-made structures consist of a few vehicle routes, mines, and communications towers. The vehicle routes create only a moderate contrast due to their curvilinear nature and vegetative screening. Existing mining scars are small and create low contrast. The visual impact of existing communications towers is low because they are relatively small and located in the background distance zone.

Key observation points (KOPs) consist of Interstate Highway 8 and Old Highway 80 along the south and west edges of the study area. Approximately 50% of the study area is visible from an inferior position in the foreground distance zone. This visible foreground area includes the west, south, and east slopes of Gray Mountain and Table Mountain, and the area south of Interstate 8. The remainder of the study area is in either the background or seldom-seen zone.

KOP #1 is located along Interstate Highway 8 and Old Highway 80 on the south side of the study area. It affords close-up views (from a distance of one mile or less) of much of the southwestern and southern slopes of Table and Gray Mountains, as well as the entire study area south of Interstate 8.

The study area is visible for approximately 3 to 4 minutes to both east and westbound travelers on Interstate 8 and Old Highway 80 as they pass through the KOP. Because the freeway is relatively straight in this area, many travelers are able to take time to study the scenery as they pass by.

KOP #2 is located west of the study area along Interstate 8 in Walker Canyon. This KOP affords a sweeping view of the west and northwest slopes of Gray and Table Mountains and the Jacumba Mountain ridge extending north from Table Mountain. This view is primarily available to eastbound travelers only. Because the freeway is descending a canyon at this point, the attention of most travelers is centered on the road itself during most of the passage through the KOP area, though the view is very impressive. Much of the foreground zone (up to 3 miles from the freeway) is composed of rugged topography consisting of boulder-strewn ridges. From the closest edge of the background zone, a relatively flat plain extends east at a flat angle for approximately one mile to a rocky ridge which forms the skyline.

C. Biological Resources

Vegetation

The study area lies in a vegetative transition zone between the Colorado Desert to the east, and the California Chaparral to the west. Where these two vegetative formations meet, in a line extending from the San Jacinto Mountains into Mexico, a unique blend of plants may be found. High summer temperatures and an annual precipitation of 5 to 10 inches combine to give this region a special mixture of plants.

Because plants common to a variety of communities come together here, the vegetation defies easy classification. The area has been classified as a Juniper-Pinyon Woodland in one analysis (Barbour, 1977). California Juniper are scattered through the study area, and 4 Needle Pinyon can be found nearby. However, the habitat types described by Cheatham and Haller (1975) seem to fit better. Using their descriptions, the study area was defined as follows by the Eastern San Diego County Planning Unit (ESDCPU) Environmental Impact Statement (EIS) (1980): Semi Desert Chaparral (steep)-6036 acres characterized by Juniper, Sumac, desert apricot, and buckwheat; Grassland-518 acres characterized by Needlegrass and annual Bromegrasses; and Desert Wash-36 acres characterized by cheesebush, desert willow, and allscale. Other obvious or common plants are listed in Table 3.

Several species in the study area are so uncommon that they warrant management concern. They are listed on Table 4. Although no federally or state listed Threatened, Endangered or Rare plants have been identified in the study area, three

plants that are candidates for listing by the U.S. Fish and Wildlife Service (USFWS) have been collected here. The Round Podded Milk-Vetch (Astragalus douglasii var. perstrictus), the Mountain Springs Lupince (Lupinus excubitus var. medius), and the Low Bush Monkey Flower (Diplacus aridus) are all known only from a small area centered in southeastern San Diego County and northern Baja California. Plants that have been identified as Candidate Species receive from BLM nearly all of the protection that listed species receive from the Endangered Species Act (USDI, 1982). Management plans for the area dictate that the habitat of sensitive plant species in this area is to be protected (USDI, 1981).

The problem of how to quantify the status of these plants has plagued botanists for years. However, the California Native Plant Society (CNPS) has devised an exemplary evaluation system to accomplish this. This system assigns a numerical rating to each of four factors for each potentially rare plant. This system is explained more fully in Appendix B. The California Desert District of the BLM has developed a listing of sensitivity that is based on the CNPS codes. Under this procedure, plants in this area were designated to be either Highly Sensitive, Moderately Sensitive, Limited Distribution, or Not Rare Outside California (USDI, 1980). These listings are shown on Table 4. For Astragalus douglasii var. perstrictus, which is the only plant in the Highly Sensitive category, all impacts may have to be avoided (USDI, 1980). Impacts may be allowed to the other plants on a limited basis, depending on the circumstances. Map 5 shows what areas are of the greatest concern.

The CNPS has also divided these plants into three categories describing sensitivity; these levels are shown on Table 4. Several plants on Table 4 have no BLM or CNPS rating; these are plants of the area that are not uncommon, but are still of interest to local botanists.

The sensitive and unusual plants have adapted to a narrow set of environmental constraints, which they have found in or near the study area. Reduction of the population size or modification of their habitat could rapidly affect the vigor of the species. The more impacts these species incur, the more fragile the position of the plant becomes. Thus species of interest in the study area should not be sacrificed needlessly, lest they be pushed to the brink of extinction.

Wildlife

Wildlife Species Present

The diversity of wildlife species inhabiting the Table Mountain study area is quite high (Table 5). A total of 42 species have been observed, and an additional 179

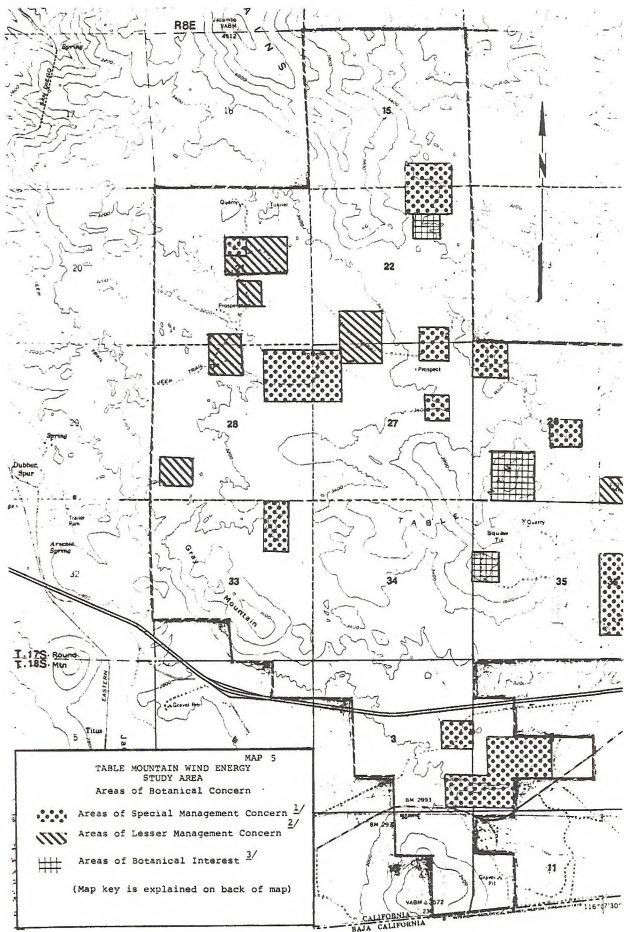


TABLE MOUNTAIN WIND ENERGY STUDY AREA

Areas of Botanical Concern

- 1/ Areas with highly or moderately sensitive species present or with several species of lesser management concern.
- 2/ Areas with plants of limited distribution.
- 3/ Areas with plants that may be common outside of California.

TABLE 3
OBVIOUS AND COMMON PLANT

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>
Acacia greggii	Acacia
Agave deserti	Agave
Ambrosia dumosa	Burrobrush
Atriplex canescens	Four-wing Saltbush
Beloperone californica	Chuparosa
Bromus rubens	Foxtail Chess
Dalea schottii	Indigo Bush
Encelia farinosa	Brittlebush
Encelia virginensis	Encelia
Ephedra sp.	Mormon Tea
Eriogonum fasciculatum	California Buckwheat
Erodium cicutarium	Filaree
Euphorbia polycarpa	Spurge
Haplopappus sp.	Haplopappus
Haplopappus linearifolius	Linear-leaved Goldenbush
Hymenoclea salsola	Cheesebush
Juniperus californica	California Juniper
Krameria grayi	Ratany
Larrea tridentata	Creosote
Lotus scoparius	Wild Alfalfa
Opuntia acanthocarpa	Cholla
Opuntia echinocarpa	Silver Cholla
Schismus barbatus	--
Simondsia chinensis	Jojoba

SCIENTIFIC NAME

COMMON NAME

Stillingia linearifolia

--

Stipa coronata

Needlegrass

Stipa speciosa

Desert Needlegrass

Trifolium sp.

Clover

Xanthocephalum sarothrae

Broom Snakeweed

Yucca schidigera

Mohave Yucca

TABLE 4

SPECIES OF INTEREST

PLANT	KNOWN TO OCCUR WITHIN STUDY AREA	CANDIDATE SPECIES FOR FWS LISTING	BLM SENSITIVITY LEVEL ²	CNPS LISTING ¹	CNPS CODE	PERENNIAL OR ANNUAL
<i>Anemone tuberosa</i>	X	--	--	--	--	P
<i>Astragalus douglasii</i> var. <i>perstrictus</i>	X	X	Highly sensitive	Rare and Endangered	2-2-1-2	P
<i>Delphinium parishii</i> ssp. <i>subglobosum</i>	X	--	Limited distribution	Rare but not Endangered	1-1-1-2	P
<i>Diplacus aridus</i>	X	X	Limited distribution	Rare but not Endangered	1-1-1-2	P
<i>Geraea viscida</i>	X	--	Not rare outside California	Rare in California Common Elsewhere	2-1-1-1	P
<i>Ipomopsis tenuifolia</i>	X	--	Not rare outside California	Rare in California Common Elsewhere	2-1-1-1	P
<i>Lathyrus splendens</i>	--	--	Limited Distribution	Rare but not Endangered	1-1-1-2	P
<i>Linanthus bellus</i>	--	--	Not rare outside California	Rare in California Common Elsewhere	2-1-1-1	A
<i>Lupinus excubitus</i> var. <i>medius</i>	X	X	Moderately Sensitive	Rare and Endangered	2-1-1-2	P
<i>Mahonia higginsae</i>	--	--	Not rare outside California	Rare in California Common Elsewhere	2-1-2-1	P

TABLE 4 (continued)

PLANT	SPECIES OF INTEREST					
	KNOWN TO OCCUR WITHIN STUDY AREA	CANDIDATE SPECIES FOR FWS LISTING	BLM SENSITIVITY LEVEL ²	CNPS LISTING ¹	CNPS CODE	PERENNIAL OR ANNUAL
<i>Mentzelia hirsutissima</i> var. <i>stenophylla</i>	--	--	Not Rare Outside California	Rare in California Common Elsewhere	2-1-1-1	A
<i>Mirabilis tenuiloba</i>	--	--	Not Rare Outside California	Rare in California Common Elsewhere	1-1-1-1	P
<i>Penstemon clelandii</i> ssp. <i>connatus</i>	--	--	Not Rare Outside California	Rare in California Common Elsewhere	1-1-1-1	P
<i>Pholisma arenarium</i>	--	--	--	--	--	P
<i>Purshia glandulosa</i>	--	--	--	--	--	P

¹Smith, 1980. The CNPS Codes are explained in Appendix²USDI, 1980.

TABLE 5

WILDLIFE SPECIES DIVERSITY^{1/} IN
THE TABLE MOUNTAIN STUDY
AREA ACCORDING TO HABITAT TYPE

TAXA	SEMI-DESERT CHAPARRAL	GRASSLAND	MIXED CHAPARRAL
Amphibians			
Observed	0	2	0
Suspected	5	3	6
Reptiles			
Observed	6	17	0
Suspected	30	16	30
Birds			
Observed	17	15	0
Suspected	81	16	110
Mammals			
Observed	4	7	0
Suspected	48	44	46
TOTAL			
Observed	27	41	0
Suspected	164	115	182

^{1/} Diversity = number of different species per taxa

species have previously been listed as potentially occurring there. A full species list is available in USDI, BLM, 1980.

Wildlife diversity is lowest in the grassland habitat type. This is due primarily to the lower number of bird species which probably occur here. This, in turn, is attributable to the lack of diverse vegetation canopies which occur in the other two habitats, as well as to a lack of perennial water. This habitat is still valuable, however, and represents a unique habitat type within the 98,902 acre Eastern San Diego County Planning Unit. Common species occurring in this habitat type include western fence lizard, western whiptail, western rattlesnake, horned lark, cactus wren, phainopepla, antelope ground squirrel, and dusky footed woodrat.

Potential wildlife diversity in the semi-desert chaparral and mixed chaparral types is comparable, and is higher than in the grassland type. Species utilizing semi-desert chaparral include California tree frog, collared lizard, western rattlesnake, red-tailed hawk, common raven, wren, long-eared myotis, and California ground squirrel. Species occurring in the mixed chaparral type include granite spiny lizard, side-blotched lizard, ruby crowned kinglet, common raven, cactus wren, black-tailed jackrabbit, and desert woodrat.

Wildlife Species of Special Significance

The criteria used to determine significant species are the inclusion or candidacy for inclusion of a species on state or Federal lists of rare, threatened, or endangered species; a species included on the USFWS list of National Species of Special Emphasis (NSSE); a species included on the Audubon Society's Blue List of diminishing species; or a game species or furbearer.

Table 6 summarizes wildlife species of special significance which may occur within the study area. It should also be noted that herpetofauna and raptors are generally protected by the State of California, either by possession limits or by other prohibitions. Table 6 only includes herpetological or avian species of additional significance which may be affected by the proposed action, although all others should generally be regarded as meriting special management consideration.

The Federal Land Policy and Management Act (P.L. 94-579) considers wildlife as a valid use of the Public Lands, and states that wildlife is to be given equal consideration in the making of management decisions. In addition to this consideration, species whose numbers are declining are given additional protection, by policy and/or law. Federal candidate species are protected by policy per draft BLM Manual 6840, which says that the best conservation and

TABLE 6

WILDLIFE SPECIES OF
SPECIAL SIGNIFICANCE

SPECIES	SIGNIFICANCE	OCCURRENCE
Magic Gecko <u>Anarbylus</u> <u>switaki</u>	State-listed rare; Federal candidate	May occur in semi-desert chaparral habitat. To date, not recorded at elevations over 600 m. Has been recorded just east of the study area.
San Diego Coast horned lizard <u>Phrynosoma</u> <u>coronatum</u> <u>blainvillei</u>	Federal candidate	May occur within study area in association with granitic rock.
Sharp-shinned hawk <u>Accipiter</u> <u>striatus</u>	Audubon Blue List	May be a winter resident in semi-desert chaparral habitat.
Golden Eagle <u>Aguila</u> <u>chrysaetos</u>	NSSE	Nests and forages within study area, although doesn't nest every year. Year long resident.
Marsh hawk <u>Circus</u> <u>cyaneus</u>	Audubon Blue List	Has been recorded in study area, but season and abundance not known.
California quail <u>Callipepla</u> <u>californica</u>	Game species	Occurs within study area near water.
Gambel's quail <u>Callipepla</u> <u>gambellii</u>	Game species	Occurs within study area near water.

TABLE 6
(continued)

WILDLIFE SPECIES OF
SPECIAL SIGNIFICANCE

SPECIES	SIGNIFICANCE	OCCURRENCE
Mountain quail <u>Oreortyx</u> <u>pictus</u>	Game species	May occur rarely within study area.
Band-tail pigeon <u>Columba</u> <u>fasciata</u>	Game species	May occur rarely within study area.
White-winged dove <u>Zenaida</u> <u>asiatica</u>	Game species, NSSE	Occurs within study area year long.
Mourning dove <u>Zenaida</u> <u>macroura</u>	Game species, NSSE	Occurs within study area year long.
Short-eared owl <u>Asio flammeus</u>	Audubon Blue List	May occur within study area.
Willow flycatcher <u>Empidonax</u> <u>traillii</u>	Audubon Blue List	May occur within study area.
Scrub jay <u>Aphelocoma</u> <u>coerulescens</u>	Audubon Blue List	Present in study area.
Bewick's wren <u>Thryomanes</u> <u>bewickii</u>	Audubon Blue List	Present within study area year long.
Loggerhead shrike <u>Lanius</u> <u>leudovicianus</u>	Audubon Blue List	Present within study area year long.
Yellow warbler <u>Dendroica</u> <u>petechia</u>	Audubon Blue List	Migrant
Grasshopper sparrow <u>Ammodramus</u> <u>savannorum</u>	Audubon Blue List	May occur within study area.

TABLE 6
 (continued)
 WILDLIFE SPECIES OF
 SPECIAL SIGNIFICANCE

SPECIES	SIGNIFICANCE	OCCURENCE
Spotted bat <u>Euderma</u> <u>maculata</u>	Federal Candidate	May occur within study area.
Kit fox <u>Vulpes</u> <u>macrotis</u>	Fully protected furbearer	May occur within study area.
Gray fox <u>Urocyon</u> <u>Cinereoargenteus</u>	Furbearer	May occur within study area.
Coyote <u>Canis</u> <u>latrans</u>	Furbearer, NSSE	Occurs throughout study area.
Ringtail <u>Bassariscus</u> <u>astutus</u>	Fully protected furbearer	May occur within study area.
Long-tailed Weasel <u>Mustela</u> <u>frenata</u>	Furbearer	May occur within study area.
Badger <u>Taxidea</u> <u>taxus</u>	Furbearer	May occur within study area.
Striped skunk <u>Mephitis</u> <u>mephitis</u>	Furbearer	May occur within study area.
Spotted skunk <u>Spilogale</u> <u>putorius</u>	Furbearer	May occur within study area.
Mountain lion <u>Felis concolor</u>	Fully protected furbearer	May occur within study area.
Bob cat <u>Lynx rufus</u>	Furbearer	May occur within study area.
Mule deer <u>Odocoileus</u> <u>hemionus</u>	Game species	Occurs in study area.

TABLE 6
 (continued)
 WILDLIFE SPECIES OF
 SPECIAL SIGNIFICANCE

SPECIES	SIGNIFICANCE	OCCURRENCE
Peninsular bighorn sheep <u>Ovis canadensis</u> <u>cremnobates</u>	State-listed rare	May occur on periphery of study area.

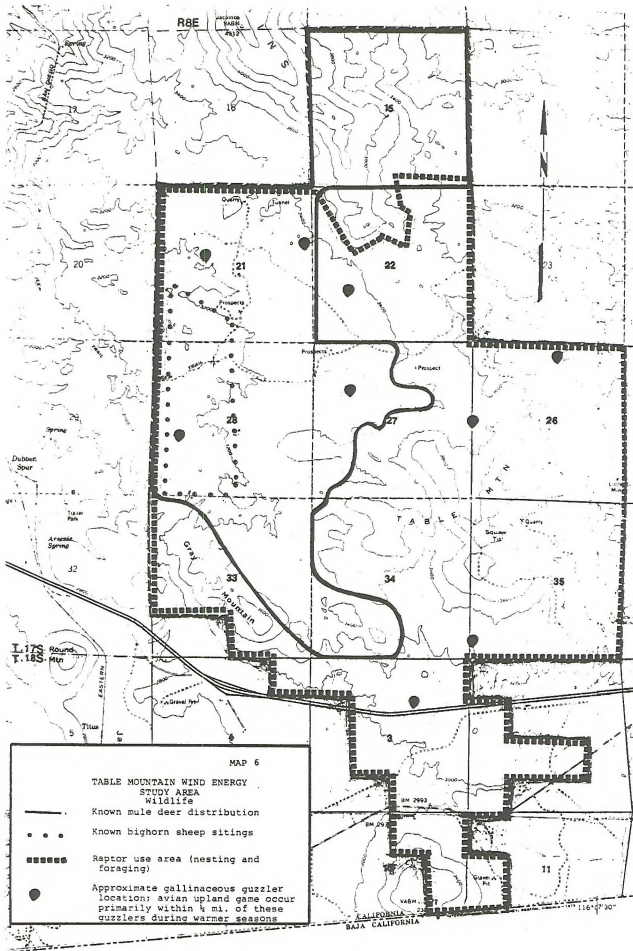
management philosophy is to prevent declines in habitat - and thus in populations - which would warrant official listing. The authorities for this draft Manual include the Endangered Species Act of 1973 (16 U.S.C. 1531 et. seq.), as amended; the Sikes Act, Title II (16 U.S.C. 670 et. seq.); NEPA (42 U.S.C. 4321 et. seq.), as amended; FLEMA (43 U.S.C. 1701); and DM 235.1.1.A. State-listed species are protected per Manual 6840.2, whose objective is to conserve State-listed species. The authorities for this Manual are the California Species Preservation Act of 1970 (Fish and Game Code sections 900-903, 2050-2055); California Native Plant Protection Act of 1977 (Code sections 1900-1913, 1925-1926); FLPMA; ESA; Sikes Act; BLM Manual sections 6840.06, 6840.2; CSO IM CA-83-49; and BLM/CDFG MMOU (CA-192). Blue Listed species are included in the list of significant wildlife because a continued decline in numbers may eventually lead to state or Federal listing. Additionally, golden eagles, which are neither Federal candidates nor state-listed species, are protected by the Bald Eagle Protection Act of 1940 (16 U.S.C. 668), which establishes penalties for a variety of actions impacting this species. National Species of Special Emphasis, while they do not receive special protection, are included because they have been identified by the U.S. Fish and Wildlife Service as high profile species warranting national attention and management (Fed. Reg., Vol. 48, No. 237).

Most of the study area has been withdrawn from disposal under the non-mineral public land laws as the Jacumba National Cooperative Land and Wildlife Management Area. The California Department of Fish and Game has installed nine gallinaceous guzzlers in this area.

Known sensitive wildlife areas and gallinaceous guzzler locations are shown on Map 6. A discussion of primary wildlife of special management concern either recorded or highly likely to occur in the study area is presented below.

Magic gecko. No specific survey has been conducted in the study area. The appropriate granitic and igneous substrate is present for their occurrence. Although the species has not been recorded at elevations above 600 m, it may be present at these higher elevations; the species has been recorded just east of the study area (Fritts et. al., 1982).

San Diego horned lizard. No specific survey has been conducted in the study area. This species occurs in chaparral habitat in coastal and peninsular ranges in San Diego County, and has been recorded in eastern McCain Valley (Brode, pers. comm.). This area is to the west of the study area.



Golden eagle. Several reports exist of this species within the study area (Boyce, 1976; Baldrige, 1977; USDI, BLM, 1978; Powell, 1983 pers. comm.; Mason, 1984 pers. comm.). This breeding site has a long history of use (Baldrige, 1977). Vergne did not observe active nesting in 1981 during a cursory overflight (Vergne, 1983, pers. comm.). Golden eagles, however, do not always use the same nests every year. Equally important are foraging areas, which the study area and surrounding locations also provide. Without suitable foraging areas, successful nesting will not occur.

Upland game (quail, dove, pigeon, rabbits, and hares). Quail and dove occur throughout the study area, primarily in areas providing a water source. Primary avian species are Gambel's and California quail, and mourning dove. Blacktail jackrabbits occur throughout the study area, and their occurrence is less limited by water availability than is that of desert cottontail. The latter probably occur in all habitats under consideration. Upland game, while meriting special management consideration, are not unique to the study area.

Mule deer. This species has been observed throughout most of the study area (USDI, BLM, 1978; Jorgenson, 1983, pers. comm.; McKinnie, 1983, pers. comm.; Mason, 1983, pers. comm.). It is not known whether fawning or breeding occur within the study area. Water limits use of the area by big game species.

Peninsular bighorn sheep. No specific surveys have been conducted in the study area. However, individual sightings indicate use to the west of the study area (Russi, 1983, pers. comm.) as well as at least occasional use within it (May, 1984, pers. comm.; Powell, 1983, pers. comm.) as recently as 1982 (May, 1984, pers. comm.).

Furbearers. Specific distributional information is limited. Coyotes occur throughout the study area, while other species are likely to occur in appropriate habitat.

Spotted bat: No specific survey has been done.

D. Cultural Resources

Archaeological properties, historic sites, and Native American values represent the spectrum of cultural resources within the Table Mountain study area. Years of archaeological reconnaissance have recorded over 200 prehistoric sites. Linked to the ancestors of today's Kumeyaay Indians, these sites represent an unparalleled concentration of prehistoric habitation and work shop locations. Site complexity and site inter-relationships create an outstanding opportunity for interpreting how prehistoric populations earned their livelihood.

Table Mountain is also noteworthy because of shamanistic links to the mountain. Native American values are high since the general area served as focal point for use. Contemporary Kumeyaay individuals still maintain recollections of Table Mountain. Their memories can assist future archaeological research and add a new dimension to site analysis.

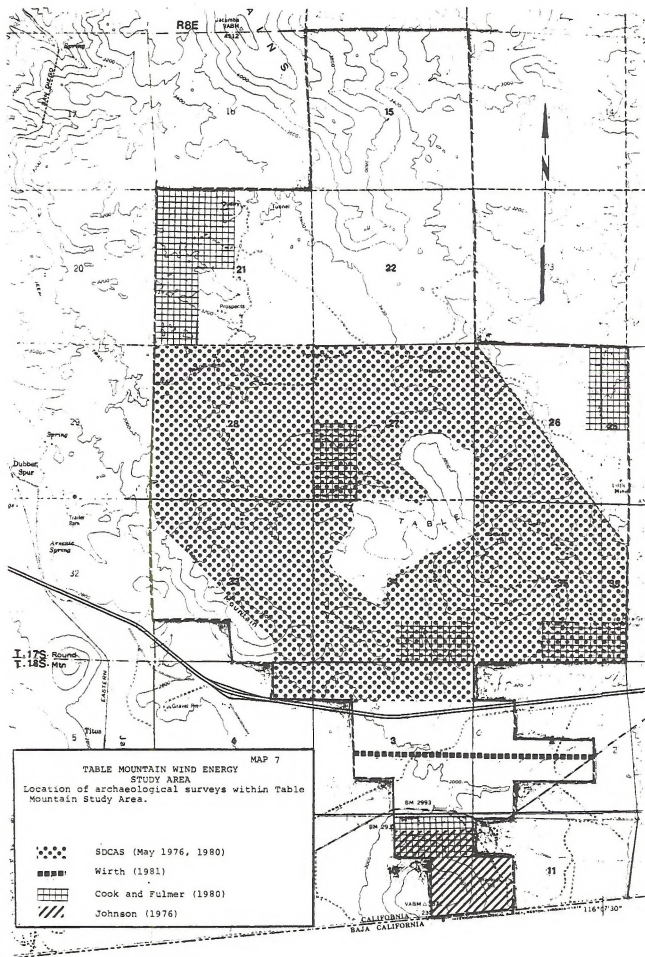
PREVIOUS RESEARCH:

There has been considerable archaeological inventory within the project area. Four separate surveys have examined approximately 55% or in excess of 3,600 acres. San Diego County Archaeological Society (SDCAS) contributed the bulk of data by examining a large block of public land north of Interstate 8 (Map 7).

As a nonprofessional group, SDCAS viewed the Table Mountain project as both a training exercise and as a contribution to southern California prehistory. Work has taken place over a nine year period from 1973 to 1982, although the bulk of data was gathered between 1975 and 1977 (May 1980). Field visits for related projects now constitute an annual event for the society. Several reports, journal articles, and professional papers describe the SDCAS Table Mountain efforts (May 1976, 1980a, 1980b, n.d.).

Two surveys have been conducted south of Interstate 8. Johnson (1976) reports on a survey adjacent to the International Border (Map 7). As part of the defunct Sun Desert Project, Johnson's preliminary study attempted to demonstrate cultural resource trends within the proposed corridor.

The 500 kV Southwest Powerlink transmission line passes through the study area. Wirth Environmental Services conducted the cultural resources survey (1981), documentation (1982), and data recovery (1982b) of affected properties within the current study area (Map 7).



The Bureau of Land Management has also funded archaeological research within the study area. Archaeological Systems Management (ASM) conducted a statistically derived sample or Class II inventory over all public lands in eastern San Diego County. Their data became incorporated into a Grazing Environmental Impact Statement.

ASM examined eight 80 acre sample units throughout the project area (Map 7). Three of their units overlapped previous SDCAS surveys and one unit reexamined work by Johnson. Their survey duplicated results of the SDCAS project, but failed to replicate Johnson's inventory. The ASM study is noteworthy since it provides archaeological site density and population estimates with calculated confidence limits (Cook and Fulmer 1980).

The reliability of each survey varies considerably. The Bureau's Manual calls for a Class III inventory employing transects at a 30 meter maximum in order to adequately document archaeological values (USDI, BLM Manual 8111.14B). Only the Wirth survey (1981) conforms to these standards.

The years of survey by SDCAS are thorough, but not systematic. Field personnel were often nonprofessional archaeologist in pursuit of training. Johnson's 1976 project employed widely spaced transects beyond the 30 meter standard. Finally, the ASM survey spaced observers at 50 meter intervals as specified by the contract. Each of these studies may have missed cultural resources.

NATIVE AMERICAN ENVIRONMENTAL PERSPECTIVE

Table Mountain represents a unique setting where stone and abundant plant resources combined to attract large aggregates of prehistoric Native Americans. Table Mountain volcanics represents the only occurrence of fine grained lithic material located along the Peninsular Range escarpment (Strand 1962). Such stone proved indispensable for the manufacture of prehistoric tools. Several sites identified by SDCAS have been termed quarries and mark the location for aboriginal acquisition of raw stone material.

Table Mountain is located in a transitional environment between the desert floor and upland mountains. Important nutritional plants from both areas abound in the study area. Agave, "a basic food staple" (Bean and Saubel 1972:31), is particularly plentiful and "no other resource so profoundly influenced Kumeyaay subsistence economics" (Shackley 1983). Collection and processing agave offered the Kumeyaay several advantages. According to Shackley, agave offered prehistoric populations a resource that was:

- 1) High in carbohydrates at a carbohydrate deficient period in the subsistence economic cycle (late winter).

- 2) A low procurement cost resource.
- 3) An abundant and dependable resource.
- 4) Available at a season when prunus and bighorn (protein sources) were available within the biotic community. And also,
- 5) Allowed an aggregation of cimul (extended kin groups) at regular intervals for exchange, group regulation, periodic ceremonies, and exchange of subsistence information and planning (1983 V:28-29).

The spring agave harvest marked a special, festive time. Travel required for groups to access agave fields was "connected with social and religious dances and games" (Luomala 1978:601). Many Table Mountain sites contain evidence of mixed social groups, although agave processing was primarily a male oriented activity (Bean and Saubel 1972). Preparation was an arduous task which required construction of special earthen ovens (Chase 1919) called roasting pits.

Additional plant foods are present in the Table Mountain area and would have attracted prehistoric Kumeyaay peoples. Yucca, beavertail cactus, jojoba, chia, desert apricot, scrub oak, sumac, and small quantities of mesquite and possibly pinyon are reported within the study area. Additional plants of economic value include juniper, mahogany, ceanothus, buckwheat, brittle brush, creosote, and cholla.

The coincidental occurrence of biotic and geologic factors appear largely responsible for the remarkable archaeological record at Table Mountain. Poised as it is on the brink of an environmental transition zone, Table Mountain was exploited by Native American groups from the desert and coastal mountains. There is, literally, no other place like it in southern California.

INVENTORY RESULTS

Results of the above survey projects revealed concentrated archaeological sites ranging in complexity from extensive, midden bearing base camps to isolated roasting pits. The density and variability of site types set the Table Mountain study area apart from other regions. The archaeology indicates an intensive late prehistoric presence of unparalleled proportions (Table 7).

Table 7: Existing archaeological data from Table Mountain depicted by site type.

Base camp	14
Temporary camp	101
Lithic scatter	60
Roasting pit	38
Miscellaneous	14
<u>Total</u>	<u>227</u>

The sheer number of sites carries one level of significance. Obviously, Table Mountain was a busy place during prehistoric times. The significance grows as one understands and appreciates the meaning of individual site types.

Base camps are a spectacular cultural component of the Table Mountain archaeological data base. These resources are often associated with villages and denote areas of habitation of an indeterminate length. These prehistoric sites represent complex sites with surface concentrations of flakes, stone tools, pottery, milling equipment, bedrock seed crushing and grinding surfaces, burned bone, evidence of camp fires or other features. Base camps sometimes include individual rock shelters and rock art panels. These sites usually contain buried cultural artifacts. Prehistoric populations conducted a wide spectrum of maintenance, manufacturing, and processing activities as well as various rites and rituals at these locations. Burials are also expected to be present in or around base camps.

Habitation base camps form a continuum with temporary camps within the Table Mountain area. Temporary camps exhibit great variability in terms of size, artifact composition, and feature content. These sites, by definition, are inferred to consist of extractive subsistence-related activities with short duration camping. Materials were consumed or returned to the central base camp. BLM concludes that temporary camps represent "an open site with any combination of flaked stone artifacts, ground stone, fire-affected rocks and/or ceramics..." (USDI, BLM 1980a).

Fine grained andesite is nonrandomly scattered over the wind study area. Such locations served as focal points for tool production and transport of raw stone material to other sites. Lithic scatters range from single episode flaking stations to areas of prehistoric quarrying which left evidence of cobble reduction and primary flaking.

Roasting pits constitute an important aspect of the archaeological record and have been previously mentioned. Use of the term in Table 7 requires clarification. Roasting pits as a site type occur either singularly or in multiples. One site within the district, for example, contains ten separate pits but, is listed only once. Table 7 belies the importance of these pits by under representing their numeric presence. Finally, in addition to agave, the ancestral Kumeyaay cooked a wide variety of plant and animal foods in these features.

The entire site aggregate at Table Mountain represents a microcosm of prehistoric life in the desert transition environmental zone. Base camps and larger temporary camps served as hubs from which Indian populations ventured forth

to exploit Table Mountain resources. Many of the sites are interrelated since both resource extraction and consumption occur within the study area.

TABLE MOUNTAIN DATA

The Table Mountain archaeological data can be compared to other clusters of public land in the region. McCain Valley and the Vallecitos-Canebrake area comprise two additional large land masses administered by BLM in eastern San Diego County. These areas were also inventoried by ASM in a manner consistent with the work performed at Table Mountain. The ASM statistical report concluded that "the Table Mountain regional stratum (coincident with the present study area) contained a significantly higher density of total sites than any other region" (Cook and Fulmer 1980:119). Pertinent results are listed below.

Table 8: Statistical site density estimates (per square mile) for the Vallecito-Canebrake, McCain Valley, and Table Mountain areas (after Cook and Fulmer 1980).

	V-C	Mc	TM
Total density	41.01	19.49	41.14
Roasting Pit Density	26.73	9.16	13.71
Actual site density	14.28	10.33	27.43

Note: Roasting pits were deleted from the above estimates since they generally represent single events and act as background noise. Roasting pits are also more common in those environments exhibiting dense agave stands.

These density figures dramatically support the previous statement that the Table Mountain archaeological presence stands alone. The ASM study, funded by the Bureau, demonstrates that the project area contains nearly twice the density of prehistoric sites as other areas. From this perspective alone, Table Mountain contains an unusually high cultural resource record, both known and yet to be discovered. The quantity of Table Mountain archaeological data is not duplicated on other federal lands being managed by BLM for the public good.

SUBSURFACE ARCHAEOLOGY

Several Table Mountain sites have been tested for their subsurface cultural component. SDCAS excavated several test units in an attempt to ascertain the depth and length of occupation around Table Mountain. Wirth archaeologists tested two sites within the study area to mitigate impacts

from transmission line construction. Results of these efforts are summarized in Table 9.

Table 9. Summary of excavated, subsurface data from the Table Mountain study area.

Site # 4-SDi-	Site Type	Group	Lithic Artifacts	Ceramic Artifacts	Units	Depth (CM)
4301	T.C.	SDCAS	634	23	2	50
4294	B.C.	SDCAS	364	83	1	30
9319	B.C.	SDCAS	467	52	1*	30
9320	R.P.	SDCAS	(Roasting pit test)			--
7059	B.C.	WIRTH	12,182	110	10@	40-120
7059	B.C.	WIRTH	721	31	10**	20-40
7051	B.C.	WIRTH	84	1	5**	20-40

Notes: *: Unit measures 1.5 x 1.5 meters, all other equal 1 x 1 meter; @: units located judgementslly;
 **: units located randomly; T.C.: Temporary camp; B.C.: Base camp; and R.P.: Roasting Pit.

The excavation results indicate that at least some Table Mountain sites contain significant archaeology buried below the ground. This is a process which took generations to complete. The number of additional sites with subsurface archaeology remains unknown.

The possibility of these deposits, nevertheless, increases the significance of Table Mountain archaeology. In general, buried sites contain dietary information, climatic data, intact cultural features, datable materials and sometimes evidence of sequential occupation. Subsurface artifacts and materials compliment surface archaeology and provides the discipline with its strongest asset: a look at prehistoric life over long time periods.

RESEARCH AND SIGNIFICANCE

The importance of Table Mountain archaeology lies in the range, complexity, and diversity of research questions which are available for study. Prehistoric data contained within the study area can greatly increase knowledge of our cultural past and heritage. Research questions available for study are virtually limited only by one's imagination. Investigation opportunities exist on intra- and inter-site levels as well as within a regional context.

Intra-site research involves a wide range of site-specific and specialty projects. The project area contains properties with horizontal and vertical differentiation. Activity areas and site organization provide useful areas to examine prehistoric behavior and site formation processes. Assessing problems in lithic technology, searching

for meaning to rock art, and evaluating roasting pit features are all feasible avenues of study.

Inter-site relationships within the Table Mountain area can make significant contributions to our understanding of the prehistoric Kumeyaay. The remarkable site density and diversity permits a host of cultural ecological studies. This aspect of archaeology examines the manner in which stone age societies interacted with their environment and other social groups.

Table Mountain archaeology contains much data regarding certain food gathering and resource collections patterns. Results have implications regarding prehistoric social mechanisms and dynamics. Evaluating organizational and activity differences between Table Mountain temporary camps and base camps will enable archaeologists to better interpret late prehistoric settlement patterns.

Regional research questions, which contain significance beyond the confines of Table Mountain, abound. The desiccation of Lake Cahuilla and its impact upon Native Americans is an important problem. Processes of culture change and adaptation to environmental stress, both topics of general anthropological interest, may be addressed by examining Lake Cahuilla - Table Mountain relationships. Population movements, types of cultural diffusion, and economic exchange represent additional regional questions. Research at Table Mountain may ultimately benefit understanding of hunter-gatherer societies from elsewhere in time and space. The above research questions and others are elaborated upon in existing documents (May n.d.; Wirth 1982; USDI, BLM 1982).

Archaeology ignites the imagination of people of all ages. Interpreting prehistoric patterns at Table Mountain can provide the general public with new insight into Native American culture. Education and public involvement leads to increased sensitivity and voluntary compliance for protection of cultural resources. Major population centers lie near the study area. Interpretive centers are feasible and certain sites could serve as outdoor classrooms. This would involve the citizenry in a direct and meaningful manner with their prehistoric heritage.

The environmental context and visual integrity of the study area are important attributes which encourage developing outdoor museums. The contemporary setting is relatively pristine and is marred only by several roads and scattered mine works. The remoteness of the region, the rugged characteristics of the landscape, and the absence of man's intrusions enhance the educational and aesthetic experience. It is nearly possible to recreate an aboriginal scene as it existed on Table Mountain several hundred years ago. The pristine setting constitutes an important aspect of the study area, particularly north of Interstate 8.

MANAGEMENT ACTIONS

The Bureau has taken several administrative steps in response to the rich cultural resource data base present around Table Mountain. The archaeology stimulated several protective management decisions which were enacted as a result of the Bureau's planning system. Map 8 portrays portions of the study area which have been identified as an Area of Critical Environmental Concern (ACEC). Finally, most of the known archaeological resources have been nominated to the National Register of Historic Places under two separate districts (Map 8).

The Eastern San Diego County Planning Unit Management Framework Plan (MFP), adopted in 1981, includes several protective management decisions which affect the archaeology. The MFP step I recommended that BLM should manage Table Mountain "as (an) archaeological reserve zone, restrict access and other uses". MFP step II elaborated on this and calls for protection of "archaeological values in the southern half of Table Mountain. Designate as an ACEC". This recommendation carried over to MFP step III with this rationale:

Table Mountain contains numerous, significant and diversified archaeological sites. Vandalism is occurring along with some ORV damage. The ACEC designation will help protect sites through specific management prescription (USDI, BLM 1981:42).

BLM support for the MFP step III decision calls for a series of support actions. These include:

- 1) Prepare ACEC activity plan;
- 2) Restrict vehicular access to the Table Mountain road (which skirts the eastern flank) and close the road to the top of Table Mountain (Map 9);
- 3) Increase patrol; and
- 4) Acquire small parcels on southern side of Table Mountain (Map 9).

An ACEC is defined by the Federal Land Policy and Management Act (FLPMA). In Section 103(a) FLPMA states that an ACEC is an area "...within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural or scenic values...". The Bureau considered Table Mountain eligible as an ACEC when the major impacts were vandalism and off-road vehicle activity.

An environmental resource must be considered "important" to qualify as an ACEC. According to BLM an area can be found "important" if it has qualities that give it special worth, consequence, meaning, distinctiveness or cause

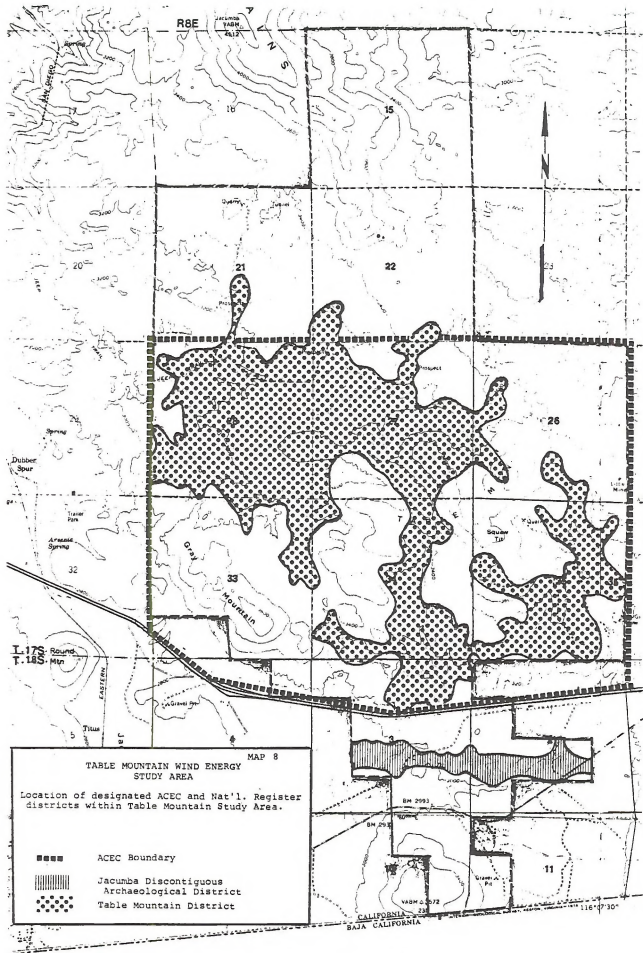
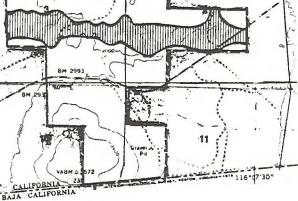
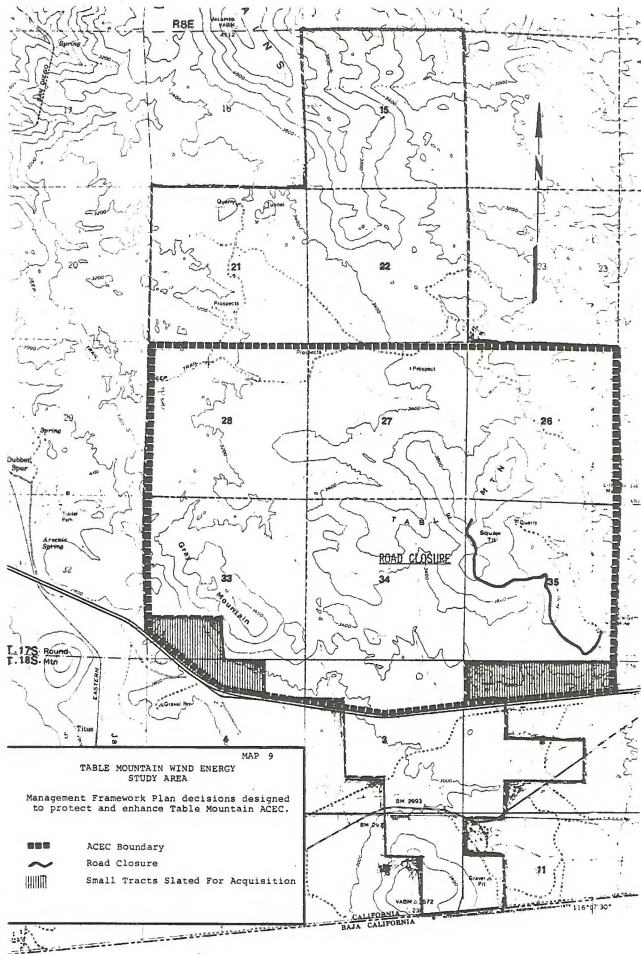


TABLE MOUNTAIN WIND ENERGY STUDY AREA MAP 8

Location of designated ACEC and Nat'l. Register districts within Table Mountain Study Area.

- ACEC Boundary
- ▨▨▨▨ Jacumba Discontiguous Archaeological District
- Table Mountain District





MAP 9
TABLE MOUNTAIN WIND ENERGY
STUDY AREA

Management Framework Plan decisions designed
to protect and enhance Table Mountain ACEC.

- ▣▣▣▣ ACEC Boundary
- ~ Road Closure
- ▨▨▨▨ Small Tracts Slated For Acquisition

for concern especially when compared to any like or similar resources. It also is generally of more than local significance. Qualities or circumstances that make such a resource fragile, sensitive, rare, irreplaceable, endangered, threatened, or vulnerable to adverse change are among the causes for concern (USDI, BLM 1980b). There is no question that Table Mountain qualifies as an ACEC.

Two archaeological districts, included on or eligible for the National Register of Historic Places, are present within the study area. Established by the National Historic Preservation Act of 1966, the National Register is "the official list... of the Nation's cultural resources worthy of preservation" (BLM Manual 8100). The National Register also records "districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, and culture" (Congress P.L. 89-665).

The Jacumba Discontiguous District is considered eligible for inclusion on the National Register (Map 8). District boundaries largely conform to the occurrence of archaeological properties within the Southwest Powerlink right-of-way. Four separate site complexes within Jacumba Valley constitute the district, although only 1.5 linear miles cross the study area.

The Bureau initiated nomination of 183 archaeological properties around Table Mountain on September 21, 1982. The Table Mountain District (Map 8) largely follows the distribution of sites recorded by SDCAS. Only portions of the wind study area have been examined by the avocational group (Map 7). Large parts of sections 15, 21, and 22, for example, have not been surveyed. Additional archaeological properties outside the district are certainly eligible for inclusion on the National Register. These sites only require identification.

The Table Mountain District, which consists of 1,796 acres, was formally enrolled on the National Register on October 28, 1983. The archaeology of this district is outstanding and is probably typical of resources found throughout the study area. The National Register document concludes by stating that

...the complexity and density of cultural resource values are duplicated in few other places in the region. Public educational and scientific opportunities mark the district as a pivotal place for understanding late prehistoric populations in southern California. Table Mountain District should be preserved for all generations (USDI, BLM 1982).

HISTORY:

The Table Mountain area contains few historical resources. The absence of surface water largely precluded development. Mining constitutes the primary historical use within the study area. Sand and gravel, feldspar, and semi-precious gems were extracted during the turn of the century and as late as the 1940s (Jaques 1980). None of the mines was particularly noteworthy or productive. Evidence of their presence is unobtrusive.

An important transportation route also passes through the study area. The road represents an early attempt to traverse the mountains. It has been largely obliterated from later use. The remainder of roads within the study area mostly relate to mining activity.

Historic resources within Table Mountain public lands are not considered sensitive. The location of historic properties will not preclude wind development. Project impacts can be mitigated, if necessary. The historic element of Table Mountain cultural resources will receive no further comment.

NATIVE AMERICAN VALUE:

The Table Mountain area is considered sensitive to contemporary Kumeyaay Indians for secular and sacred reasons. Tangible evidence for both of these matters exists within the archaeological record. Finally, links can be drawn between some areas and Kumeyaay elders. This offers new potential for interpreting and understanding a portion of the human experience.

Native American values associated with Table Mountain are only partly known. Much more information needs to be acquired before an accurate portrayal of heritage values can be undertaken. This section represents the current level of information. The bulk of data comes from the ethnographic element (Woods 1980) of the Southwest Powerlink Project. This study, however, lacks specificity since Table Mountain lies outside direct impacts and the primary study zone (Woods 1982).

The El Centro Resource Area attempted to bridge data gaps by soliciting input from Kumeyaay reservations, knowledgeable individuals, agencies, and organizations (Appendix C). This contact procedure is well established as Bureau policy (USDI, BLM Manual 8111, 8100 Supplement) and identified in the newly adopted regulations (43 CFR Part 7.7b1) which implement the Archaeological Resources Protection Act of 1979. This request for information resulted in two field visits and two written responses. These data will be incorporated into the discussion, as appropriate.

Federal legislation exists regarding the consideration and protection of Native American values. The National Historic Preservation Act of 1966 states that the "cultural foundations of the Nation should be preserved as a living part of our community life" (Congress 1966: P.L. 89-665). The statement of purpose continues and declares that "the preservation of this irreplaceable heritage is in the public interest so that its vital legacy... will be maintained and enriched for future generations of Americans" (Congress 1966).

The American Indian Religious Freedom Joint Resolution is quite specific. In part it concludes that

it shall be the policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian (Congress 1978:P.L. 95-341).

This resolution recognizes operational difficulties between Native American socio-cultural values and the need for effective land management.

The Table Mountain area is important to today's Kumeyaay because it served as a traditional gathering area. As previously mentioned, the region abounds with important plant foods. In support of the region's productivity, Woods (1980) noted that an early ethnographer (Spier 1923) recorded fifteen villages in the region. Some of these habitation areas may exist within the study area.

The general area figures in trade and exchange systems between the desert and mountains. Resources available for trade in the study area include the aforementioned agave, other food plants, cordage, abundant medicinal plants, and steatite. The presence of desert pottery fragments indicates contact with desert peoples.

Table Mountain is "of high religious significance to Native Americans" (USDI, BLM 1981). Flat areas served as places for "healing and diverse ceremonial activities" (Woods 1980). According to one respondent, the mountain was used exclusively by Kumeyaay shaman (Kumeyaay 1984), although this could not be verified by Woods data. The Kumeyaay letter indicated that Table Mountain

...was a place for sacred healing ceremonies, for meditating and for singing. It was also a place where the kuseyaays (shaman) would confer before the people of a mountain or a desert village could move on to plant or gather pine nuts. It was from this mountain that the kuseyaays would watch the sun and be able to tell the people the proper times for their annual activities (Kumeyaay 1984).

Few examples of traditional healing centers exist. The ethnographic information collected by Woods (1980, 1982) represents a transect from coastal areas to the Colorado River and serves as a comparative data base. He reports thirty-six references to Native American sacred area. Including Table Mountain, only three of these made reference to healing or curing activities.

Table Mountain holds ethnic importance for other reasons. Woods informants referred to it as Mat kwisyaay (witch or shaman mountain). The mountain is believed to figure into certain Kumeyaay creation myths. Knowledge of Table Mountain extends into the desert region since one of Woods consultants felt "that people from the desert area traveled to this mountain because of its power" (1980: A2-6). Table Mountains power presumably lay in its role in the healing process.

One respondent to the draft environmental assessment provided some specific data regarding the significance of Table Mountain to the Kumeyaay people. Shipek (attached) outlines a series of important limitations which arise when contemporary land managers attempt to interface with Native communities. Her response provides additional documentation. In part, Shipek states that:

...Table Mountain is a sacred mountain. In the part only tribal leaders (Kwaipai and Kuchut Kwataay) (Kumeyaay terms) and priests or medicine men (Kuseyaay) went up on the top. The mountain in one of the few surviving, undeveloped, potentially undamaged, locations for Kumeyaay observation of the solstices, as well as the location for solstice ceremonies which were performed on the top by the leaders and kuseyaays. Also, around the base of the mountain the rest of the people assembled to perform the lay part of the appropriate ceremony (attached).

Finally, an eagle eyrie reported on the mountain (May 1984) holds religious significance to the Kumeyaay. In traditional Kumeyaay culture, eagle nests were owned by individual villages since the birds played an important role in the Eagle Dance (Spier 1923). This dance was significant since it was enacted at the anniversary of a chief's death (Waterman 1910). The dance also functioned as an exchange of wealth.

Additional portions of the study area are considered sacred. Burials or cremations are reported in areas north of Table Mountain (Kumeyaay 1983, 1984). Places of burial are perhaps the most sensitive and significant issue to Native Americans. Woods addressed this problem during his interviews. One person said that:

Well, from my own experience...we were preached a lot, you know, about death--all our customs and traditions and what we should do and all that, we heard that growing up, and I'm going by what they told me and I still believe them. That any burial -that's the most sacred thing to us... I was told that if we find anything we are not to touch it or move it (Kumeyaay 2-8-79. In Woods 1980 (Emphasis Added)).

Archaeological evidence exists within the study area to support the occurrence of prehistoric rites and rituals. Several sites contain rock art panels or elements. Prehistoric pictographs are generally linked with shamanistic activity (Hodges 1976) and their presence is consistent with informant statements.

Prayer sticks are enigmatic features which may be related to shamanistic practices. Prayer sticks are tree limbs, often with a forked end, which are propped inside an otherwise unused rock shelter. Functional explanations are difficult to establish. Offerings, meditative centers, and food cache holders have all been postulated to explain their presence. Several of these finds are reported within the Table Mountain National Register District.

Archaeological research rarely has an opportunity to obtain assistance and support from the Native American community. Inferences are drawn and interpretations developed solely from physical remains of the prehistoric site. The contemporary Kumeyaay community contains elders who still hold memories for the Table Mountain and Jacumba areas. Their knowledge adds a new dimension to the cultural resource values in the study area.

III. IMPACTS

Impacts are generically analyzed for the construction and operation of wind turbine generators, access roads, and electrical transmission systems.

This impact analysis is based on the following assumptions of surface entry needs.

- 1) Turbine pad size 50 foot by 50 foot;
- 2) Access will be assumed to be via existing roads, trails, or designated routes of travel. If none of the above exist, assume the shortest and most logical route from pre-existing access with dimensions of 25-foot width totalling a disturbance of 3 acres per mile.

A. Land Use

Recreation

Alternative #1

Impacts to scenic quality would reduce opportunities for sightseeing in the area. Impacts to endemic plants from surface disturbing activities would adversely affect the area's value for botanical sightseeing. New road construction could have a positive impact on rock collecting by exposing more material and improving access to portions of the area previously inaccessible. However, these positive impacts could be negated if new roads and cleared areas were closed to public use.

Construction of new access roads could improve off-road vehicle opportunities by providing access to areas not previously available. However, reduced scenic quality due to the presence of new structures and facilities might reduce the appeal of the area for some ORV users. Restricting of motorized access in order to protect facilities from vandalism could reduce existing vehicle opportunities, however.

Disruption of upland game habitat from construction activities and continuing operation of facilities could adversely affect hunting opportunities.

The reduction in natural scenic values resulting from the introduction of new roads, turbines, and other man-made structures would reduce the appeal of the area for hikers and equestrian users seeking a feeling of solitude and a natural setting.

Development of lands adjacent to Anza-Borrego Desert State Park could reduce the quality of primitive recreation opportunities within adjacent State park lands.

Minerals

Alternative #1

Impacts to mineral development within the Table Mountain Study Area are minimal. Should geothermal and, or oil and gas lease applications be received and issued by the Bureau, no major impacts are anticipated since the issuance of right-of-way grants for wind energy will not preclude the issuance of these leases. In fact, the necessary access roads will enhance the ability of a lessee to access the study area for exploration activities such as a temperature gradient holes and, or seismic lines.

The possible issuance of a right-of-way may, however, be adversely affected by the mining claims in the area should the claimant wish to explore an area where wind turbines have been erected. As a result, any person or group which is awarded a right-of-way may wish to negotiate with any claimants encumbering the right-of-way.

In the case of the current contract for volcanic cinders in the NW $\frac{1}{4}$ of section 35, T. 17 S., R. 8 E., SBM, the contract covers only approximately ten acres and will probably not be impacted by any proposed development due to the sites leeward location. In fact, the small one acre level area at the quarry site could be used by a developer to assemble equipment instead of having to level an undisturbed area.

Power Transmission Corridor

Alternative #1

The development of a wind farm does not appear to conflict with the Southwest Powerlink (500 kV transmission line). However, a proper setback from the line would be required to minimize the possibility of downed equipment coming in contact with energized conductors. SDG&E has requested that any plan of development for that area be sent to them for review.

Range

Alternative #1

The construction of roads, turbines, and electrical transmission facilities will all have similar impacts to grazing. Should construction occur in the grazing season, livestock would be disrupted in the vicinity of any construction areas. Additionally, some livestock trails might be blocked, preventing the use of other forage. These actions could have the net result of eliminating a sizeable piece of rangeland from livestock use, depending on the extent of the construction activity. Although the degree of impact cannot be precisely assessed

without knowing the location of development, livestock could conceivably be driven out of the area altogether if the livestock water sources were disturbed. Construction work during the non-grazing season would have no impact on livestock.

A long-term, albeit minor, impact to livestock could result from the physical removal of vegetation through the clearing of construction pads and road construction. It is expected that 3 acres of vegetation will be lost for each mile of new road and 1 acre lost for each 17 turbines installed. In addition to areas that are kept clear of plants, such as roads, forage production would be reduced through soil erosion and compaction. The total amount of forage lost could range, depending on preexisting vegetation and the season, from none to 1 acre per AUM. Although small, the impact caused by the loss of vegetation could be as great as 20-30 AUM's lost out of a total of 247 (or 12%), if a large part of the study area is developed for wind energy.

Several other impacts may be traced to road construction. An increase in the number of roads will tend to increase the distribution of recreational use; this sometimes in the past has resulted in increased livestock harassment. Conversely, new roads may, depending on location, improve livestock distribution and facilitate management by providing increased access.

Because livestock are selective when grazing and water availability affects distribution, as yet undetermined portions of the study area may not ever be grazed. These undetermined areas will not be impacted under this alternative.

If any turbine areas are fenced, all fenced portions would be lost to livestock use. If the fenced area was more than $\frac{1}{4}$ mile in length, it could also serve as an effective barrier to livestock movement. Such fencing could potentially remove 20 or more AUM's of forage from use.

Communication Site

Alternative #1

Interference can sometimes occur when signals reflected from moving rotor blades interact with the original signals. This causes fluctuations in signal frequency and amplitude which degrade reception quality. Research in this area indicates that this interference is a function of rotor speed and swept area, the positions of the transmitter and receiver relative to the wind turbine, and the strength of the reflected signals relative to the strength of the original transmitted signal.

Wilderness

Alternative #1

Development of the former Table Mountain WSA for wind energy would constitute impairment of the area's suitability for wilderness. Construction of access roads, tower pads, turbines, and powerlines would result in impacts which would fail to meet the requirement that all authorized land-use actions be temporary in nature. Roads, powerlines, and windfarms could not practically be removed and the area reclaimed to a condition of being substantially unnoticeable within the short timeframe specified by the nonimpairment criteria.

Alternative #2

This alternative will result in no impacts to the above mentioned land uses.

B. Visual Resources

The visual contrasts of the proposed action and alternatives were evaluated from both key observation points. Visual contrast rating worksheets documenting this evaluation are on file in the El Centro Resource Area Office.

Alternative #1

Unrestricted development of all available lands within the visible foreground and background distance zones would result in visual contrasts in excess of both VRM Class II and Class IV limits. The major contrasts would be the form, line, and color structure contrasts resulting from the construction of access roads and tower pads, the placement of large numbers of turbine towers, the skylining of turbine towers on ridgelines, the rotation of the turbine rotors during operation, and the installation of power distribution lines. Road and tower pad construction would also result in landform and vegetation line contrasts in excess of acceptable Class II limits, though they would be within acceptable Class IV limits.

Development within seldom-seen zones would result in contrasts within acceptable limits from both KOPs, since the seldom seen zones are not visible from the KOPs. Visual quality within these areas would be reduced, however, for recreational users of the seldom-seen zones.

Alternative #2

No impact.

C. Biological Resources

Vegetation

Alternative #1

Impacts to vegetation could be great under this alternative. Even though the overall vegetational aspect would probably remain unchanged, entire populations of some of the more sensitive species could conceivably be extirpated.

Construction of roads, turbines, and transmission lines will require the destruction and removal of vegetation. Because the erosion potential of the solids here is generally moderate to high (USDA, 1973), irreparable damage could take place. Once the topsoil is gone, the chance is lost for the original vegetation to reestablish itself. This could result in a permanent change in vegetation where the current plant cover is removed.

In construction areas where vegetation is not removed, soil compaction can impact the surviving plants. Compaction due to construction of electrical transmission towers has been shown to decrease vegetative diversity and quantity under the towers (Clark, 1979). It has been postulated that soil compaction may restrict Geraea viscida, a pioneering and uncommon plant in the area, which establishes itself in many disturbed sites. Turbine construction and cross country vehicle travel would have similar results.

Impacts to the sensitive plants of the study area may be highly variable. The vulnerability of these plants is described on Table 10. All of these plants grow in places outside of the study area, and some are common elsewhere. Some of these species receive protection from their habitat, such as those that require rocky slope to grow. There is little chance that the proposed action would affect more than a few of those plants. Other plants could benefit from this project. Astragalus douglasii var. perstrictus is one plant that seems to have an affinity for disturbed sites. However not enough is known of this or other pioneering species to say what intensity or type of disturbance is required for them to benefit.

The plants listed on Table 10 have only a tenuous foothold in southern California. The extirpation of these plants in the Table Mountain area is unlikely, but a possibility under this alternative. Such a drastic change in the populations of these species, could threaten their existence.

TABLE 10

SPECIES VULNERABILITY

PLANT	NUMBER OF KNOWN POPULATIONS IN STUDY AREA ¹	AVERAGE POPULATION SIZE IN STUDY AREA ¹	COMMENTS
<i>Anemone tuberosa</i>	1	Unknown	Found growing in rocks on steep slopes; Table Mountain is one of the southwestern most limits of its distribution
<i>Astragalus douglasii</i> var. <i>perstrictus</i>	3	Unknown	It is often found in disturbed areas; the reason for this association is unknown.
<i>Delphinium parishii</i> var. <i>subglobosum</i>	3	12	Generally grows individually, rather than in large populations.
<i>Diplacus aridus</i>	4	78	Usually grows among rocks on steep slopes.
<i>Geraea viscida</i>	5	52	Appears to colonize some disturbed areas; its general habitat requirements remain unknown.
<i>Ipomopsis tenuifolia</i>	6	30	Usually found in small open drainages.
<i>Lupinus excubitus</i> var. <i>medius</i>	7	14	Grows in washes and on gentle slopes; it is distributed throughout the study areas.

^{1/} Based on BLM records

Wildlife

Alternative #1

General

Impacts to wildlife will occur throughout all phases of development and operation, and will include 1) habitat loss due to surface disturbance; 2) loss of individuals due to crushing, accidental collision with transmission or generation facilities, or accidental electrocution; 3) accidental injury of individuals; 4) disruption of behavior and possible physiological changes caused by noise or human activities; 5) displacement of wildlife into adjacent areas which are likely to already be fully occupied; and 6) increased harassment due to increased human accessibility in currently remote areas. Impacts will be roughly proportional to the amount of development occurring.

- a. For common, widespread species such as small mammals and common reptiles, these impacts would not significantly jeopardize the existence of any species overall. However, varying reductions in the use of the study area by small mammals and reptiles must be assumed, especially if total development occurs. This would be due primarily to direct habitat loss. Noise impacts would include disturbance of breeding activities, and also in deafening and resultant decrease in anti-predator defensive abilities. Depending upon noise levels, it could result in temporary partial abandonment of the area. In the short term, at least, adjacent areas would also be affected by an influx of displaced individuals, resulting in competition and stress until equilibrium population levels were reached, and also by noise and increased activity in the study area. Reptiles in adjacent areas may be attracted into developed areas by vibration of the turbines. Although this could lead to at least partial reestablishment of these species, it could also result in continued losses of individuals to vehicle crushing or shooting. The potential for increased human access would lead to increased harassment of small mammals and common reptiles, both through increased human presence and use, and also through killing or capturing of wildlife.

Again, such impacts would reduce use of the study area by these species, but would not jeopardize their continued existence. A more significant impact of these reductions would be in reducing the prey base available in the area for raptors and mammalian predators. Even if the area were not totally developed, this could lead to highly reduced use of the area by predators (see discussion on p.32).

- b. Common birds, including migratory species, would be subject to similar impacts - direct habitat loss, noise impacts, increased harassment, behavioral disruption, and displacement. There is also the potential for loss of individuals due to collision with transmission and generation facilities. This would affect primarily non-resident individuals, especially in poor weather conditions. It is not known whether the area is on a migration route, so the severity of this type of loss cannot be predicted. Obviously, the level of general impacts to these species is related to the degree of development occurring.

Species of Special Significance

- a. Magic gecko, San Diego horned lizard. Development in suitable habitat could impact these species by habitat loss and direct loss of individuals. Noise could disrupt behavior, including a reduction in efficiency of anti-predator behavior. As adjacent habitat is unlikely to be fully occupied, displacement of individuals may not be as detrimental as for more common species. However, it could also lead to reduction in a breeding population, which could lead to reduction in the species' effective breeding population. Increased access could make individuals more susceptible to shooting or collection. The validity of these impacts, and their severity, depend upon whether these species are actually present and in what density. Due to the rarity of these species, surveys may not record them even though they are present. Losses could therefore occur but be of unknown severity.
- b. Golden eagle. Impacts include direct habitat loss; potential loss or injury of individuals through collision or electrocution; disruption of breeding, rearing, and foraging behavior; displacement; and increased harassment due to increased access. The Table Mountain area provides air currents favorable to courtship and foraging activities (Baldrige, 1977). Golden eagles forage by soaring, contour hugging flight, and still hunting (Dunstan, et. al., 1978). Loss of individuals performing the first two types of hunting could occur due to collision. Transmission poles could provide increased perches for still hunting, but could also lead to electrocution if improperly built. Also, if serious losses of prey species resulted from development, increased perches would not be of use. There is a long history of nesting in this area. Fledgelings could be impacted more severely than adults by the potential for collisions, etc.

(It should be noted that prairie falcon nesting has been recorded in the study area, and Cooper's hawk, sharp-shinned hawk, kestrel, and red-tailed hawk nesting has occurred nearby. These species would be similarly affected.)

- c. Upland game. Impacts include direct habitat loss, loss or injury of individuals, possible disruption of nesting, displacement (with resultant stress to nearby populations), and increased harassment. Upland game - especially birds - are dependent upon water provided by gallinaceous guzzlers. The loss of any of these would severely decrease game numbers in the area. Reduction in upland game use, while important locally, would not be significant on a large scale because these species are common and widespread in the region.
- d. Mule deer. All types of impacts are applicable. As seasonal and spatial distribution are not known, specific impacts and their severity cannot be predicted. A decrease in use of the area by deer, however, can be assumed, with severity correlated with degree of development. Again, impacts would not jeopardize species' existence, but could be important locally. This is especially true if breeding or fawning occurs in the study area.
- e. Peninsular bighorn sheep. The area appears to be used at least occasionally by bighorn sheep, and is probably at the periphery of their distribution in the area. All categories of impacts could apply, depending on the level and type of sheep use in the area. Seasonal and distributional data must be gathered before a more specific impact assessment is made.
- f. Furbearers. All six types of impacts are likely to occur. A determination of species present and their distribution is necessary in order to evaluate the severity of these impacts.
- g. Spotted bat. Distributional data are necessary before a specific impact assessment is possible.

Alternative #2

No impacts.

D. Cultural Resources

Alternative #1

Direct and indirect impacts can be anticipated if wind development is permitted within the study area. Roads, transmission lines, windmill structures, and support facilities all involve obvious surface alteration. Cultural resources would be adversely affected by construction activities. Surface evidence of prehistoric activities would be disturbed, subsurface buried

archaeological materials would be disrupted by bulldozing, and sacred Native American values would be desecrated.

Wind farm development will constitute an adverse impact to Table Mountain. Federal Regulations provide guidance and direction by defining "adverse effect". According to 36 CFR 800.36 adverse effects on National Register properties include, but are not limited to:

- 1) Destruction of all or part of a property;
- 2) Isolation from or alteration of the property's surrounding environment;
- 3) Introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting;
- 4) Neglect of a property resulting in its deterioration or destruction...

The legal definition of adverse effect represents both direct and indirect impacts. Any project construction activities will harm the setting of adjacent cultural resource properties. Wind mills, transmission lines, roads, and support facilities will permanently alter the character of Table Mountain.

Data recovery, of course, is one means to mitigate impacts to archaeological values. Impacts to Native American values can only be mitigated through project redesign. Any form of data recovery is actually a double edged sword. On one edge, information will be collected and preserved. On the other edge, data recovery represents the controlled destruction of an archaeological site and is an adverse impact in and of itself. Important information is lost in the very act of data retrieval.

Full potential of Table Mountain archaeological properties cannot be realized from a data recovery perspective. Mitigation can never collect 100% of available data. Data recovery is usually focused only at that portion of a site subject to direct impacts. The unaffected portions largely remain undocumented and mitigation interpretations can be biased. Additionally, data recovery is conducted only at those Table Mountain sites which will be impacted. Such an approach minimizes the regional research perspectives and treats the aggregate of sites not as a complex unit but rather as discrete individuals. Such a particularistic approach overlooks the cultural reality of site and district formation. The general public may suffer since the data potential and interpretive value of Table Mountain archaeology would not be realized.

Full potential of the Table Mountain data base can be approached only through a phased program. Such a program would consist of an explicit research orientation in a regional perspective. The full range of site types would

be tested and evaluated to examine site specific pre-historic activities as well as site interrelationships. Certain archaeological properties would also be slated for preservation.

Members of the Kumeyaay community consider direct impacts to healing areas unacceptable. From their perspective construction constitutes a sacreligious act which would "cause irreparable damage to this sacred site and ceremonial area located on public land" (Kumeyaay 1984). Any construction on Table Mountain would constitute an affront to the Kumeyaay ethnic identity. Finally, construction may negatively affect undetected burials. Physical disturbance is one impact while spiritual disruption of cremations remains as another prime concern (Kumeyaay 1984).

Indirect impacts can be projected if alternative 1 is implemented. Development may translate into new roads. This will provide irresponsible members of the public with access into previously remote regions of Table Mountain. Acts of vandalism and site disturbance become possible. This would reduce the scientific and educational opportunities available at Table Mountain.

Project development would create significant aesthetic impacts to large portions of the study area. Construction would alter the visual archaeological context. The integrity of setting constitutes an important aspect of the Table Mountain National Register District. The nomination form states that "the archaeological sites of the Table Mountain District are in very good condition. The area is relatively pristine" (USDI, BLM 1982). Development of wind resources would irrecoverably affect the visual integrity of Table Mountain archaeology.

Project construction would hamper educational and interpretive opportunities within much of the study area. The current setting allows visitors a primal experience as they examine vestiges of their cultural heritage. Such feelings would be largely curtailed by project development.

Indirect impacts to Native American values are difficult to project. The Kumeyaay maintain that the integrity of setting is an important component in the religious experience. Wind farm development on and within close proximity to Table Mountain would seriously impair the sanctity of the mountain.

Burials may be adversely affected by indirect impacts. If construction increases access to the region, then previously hidden cremations may be subject to vandalism. Such features are favorite targets of archaeological looters.

Total leasing of the Table Mountain study area is impractical. Complete destruction of cultural resource values would constitute a significant loss to the American people. Total mitigation would be impossible because of lost data and prohibitive economics. Furthermore, issuance of any lease carries an implicit right for development. Complete development of the study area is simply not possible.

Partial development of the study area can direct physical impacts away from sensitive Native American values and archaeological properties. Areas which lack significant resources can be developed after appropriate and thorough mitigation measures. Clustering of leases around areas of existing physical and visual disturbance will minimize new impacts.

Partial leasing, however, carries a cumulative effect. If internal portions of the study area are leased, then additional impacts are imposed on the environment. Longer transmission lines and access roads would be needed to service wind farms. Longer electrical distribution lines mean greater indirect impacts and a marked decrease in the current integrity of setting.

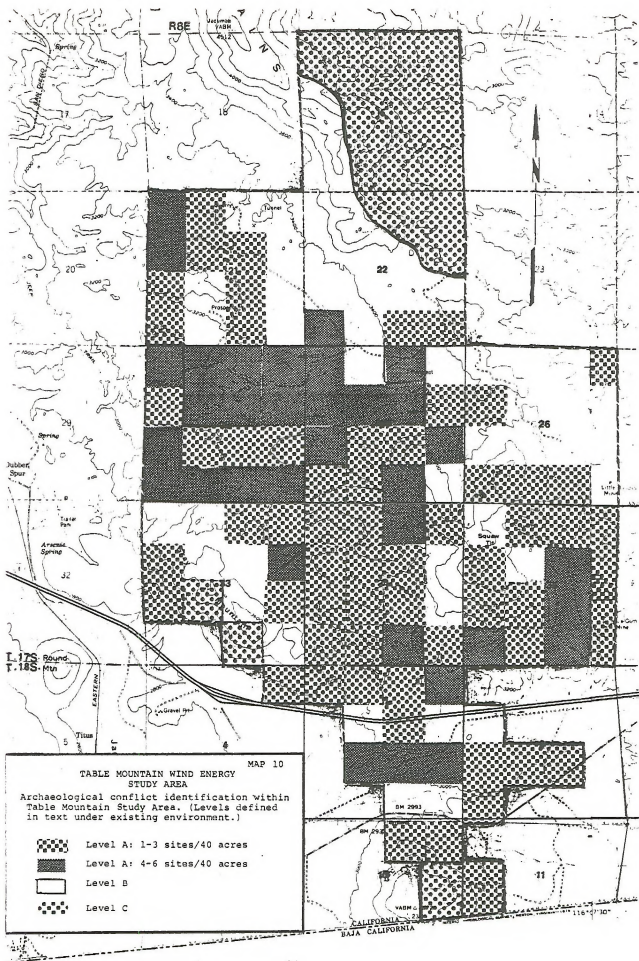
ALTERNATIVE 2: No development would maintain the Table Mountain study area at its current level of preservation.

CONFLICT IDENTIFICATION

The widespread distribution of cultural resource values within the study area leads to severe conflicts with development. Archaeological properties and Native American values will be adversely affected by direct and indirect impacts. Three conflict levels can be identified for archaeological values. These are defined below and illustrated in (Map 10). These ratings are also translated onto the impact matrix which follows this section.

LEVEL A: This conflict level corresponds to existing distribution of National Register Districts and known archaeological sites. Any development in these areas would require compliance with Section 106 of the National Historic Preservation Act. Consultation with the State Historic Preservation Office is required and depending on the level of agreement comments may be required from the Advisory Council on Historic Preservation.

LEVEL B: This conflict rating reflects areas which have not been inventoried. Archaeological values may exist. LEVEL B also contains important environmental context for existing resources. Development in these areas would irreparably damage the integrity of setting of the Table



Mountain National Register District. Scientific, educational, and aesthetic values would be severely damaged by construction.

LEVEL C: This rating refers to areas which are not considered of primary importance to National Register Districts. These areas generally lack survey information and conflicts may exist.

Native American values are ranked by three separate conflict levels. Individual levels reflect degree of sensitivity and level of documentation for the heritage concerns.

LEVEL A: This rating represents, the area considered most sensitive to the Kumeyaay community. It includes all the flat areas of Table Mountain since these portions of the mountain hold religious implications.

LEVEL B: This rating refers to areas of identified pre-historic burials. The exact boundaries are unclear, but LEVEL B has been identified by the community as containing very sensitive values.

LEVEL C: This level refers to those areas which lack Native American inventory information. Some of these areas may contain values of concern to the Kumeyaay.

Impact Matrix

The following matrix displays on a quarter-section basis those elements of the Table Mountain Study Area environment which would be affected by wind energy development. The matrix covers the impacts identified in the foregoing section.

IMPACT MATRIX

T. 18 S R. 8 E		Recreation	Minerals	Transmission Corridor	Range	Communication	Wilderness	Visual	Vegetation	Wildlife	Archaeology	Native American
SEC	SUB DIV											
2	NW $\frac{1}{4}$									X	X	
	SW $\frac{1}{4}$			X					X	X	X	X
	SE $\frac{1}{4}$			X						X	X	X
3	NE $\frac{1}{4}$							X		X	X	
	NW $\frac{1}{4}$							X		X	X	
	SW $\frac{1}{4}$			X						X	X	X
	SE $\frac{1}{4}$			X					X	X	X	X
4	NE $\frac{1}{4}$								X	X		
10	NE $\frac{1}{4}$										X	
	SE $\frac{1}{4}$											
11	NW $\frac{1}{4}$										X	
	SW $\frac{1}{4}$										X	

IMPACT MATRIX

T. 17 S R. 8 E	SEC	SUB DIV	Recreation	Minerals	Transmission Corridor	Range	Communication	Wilderness	Visual	Vegetation	Wildlife	Archaeology	Native American
	15	NE $\frac{1}{4}$						X			X		
		NW $\frac{1}{4}$						X			X		
		SW $\frac{1}{4}$						X			X	X	
		SE $\frac{1}{4}$						X			X	X	
	21	NE $\frac{1}{4}$	X					X		X	X	X	X
		NW $\frac{1}{4}$	X						X	X	X	X	X
		SW $\frac{1}{4}$							X	X	X	X	X
		SE $\frac{1}{4}$							X	X	X	X	X
	22	NE $\frac{1}{4}$						X		X	X	X	
		NW $\frac{1}{4}$						X			X	X	X
		SW $\frac{1}{4}$								X	X	X	X
		SE $\frac{1}{4}$								X	X	X	X
	26	NE $\frac{1}{4}$									X	X	
		NW $\frac{1}{4}$					X				X	X	X
		SW $\frac{1}{4}$							X		X	X	X
		SE $\frac{1}{4}$	X						X	X	X	X	X
	27	NE $\frac{1}{4}$								X	X	X	X
		NW $\frac{1}{4}$								X	X	X	X
		SW $\frac{1}{4}$							X		X	X	X
		SE $\frac{1}{4}$							X		X	X	X

IMPACT MATRIX

SEC	SUB DIV	Recreation	Minerals	Transmission Corridor	Range	Communication	Wilderness	Visual	Vegetation	Wildlife	Archaeology	Native American
28	NE $\frac{1}{4}$							X	X	X	X	X
	NW $\frac{1}{4}$							X	X	X	X	X
	SW $\frac{1}{4}$							X	X	X	X	X
	SE $\frac{1}{4}$							X		X	X	X
33	NE $\frac{1}{4}$							X	X	X	X	X
	NW $\frac{1}{4}$							X		X	X	X
	SW $\frac{1}{4}$							X		X	X	
	SE $\frac{1}{4}$							X		X	X	
34	NE $\frac{1}{4}$							X		X	X	X
	NW $\frac{1}{4}$							X		X	X	X
	SW $\frac{1}{4}$							X	X	X	X	
	SE $\frac{1}{4}$							X		X	X	X
35	NE $\frac{1}{4}$	X						X	X	X	X	
	NW $\frac{1}{4}$	X						X	X	X	X	X
	SW $\frac{1}{4}$							X		X	X	X
	SE $\frac{1}{4}$	X						X	X	X	X	

IV. MITIGATION MEASURES

In the following section, the reader is cautioned, that on cursory examination, certain mitigations appear to conflict. However, without site-specific data, which will be provided by site-specific inventories performed by the applicants, it is impossible to resolve these conflicts and therefore the mitigations are not "committed". Inventories will be performed according to all applicable BLM Manual standards, at the applicant's expense.

A. Land Uses

Recreation

1. Use Existing access routes whenever possible to minimize impacts to botanical resources and upland game habitat.
2. In areas where public use of new access roads would not create safety hazards or adversely affect botanical resources or game habitat, leave access roads open for public use.
3. Implement visual resource mitigations even in the seldom-seen zones in order to protect scenic values for recreationists using the area. (Section IV.B.).

Minerals

The only mitigation measure for minerals should be to restrict development of the study area within the ten acres under contract for volcanic cinders. To allow development of wind turbines at this site could restrict the contract operator from utilizing the site for the extraction of cinders.

Power Transmission Corridor

Equipment shall not be placed closer to the edge of the right-of-way for the Southwest Powerlink than the equipments maximum height.

Range

1. Schedule construction activity from March through October to minimize disruption of livestock grazing.
2. Keep all disturbed areas and new roads to a minimum. Waterbar and block roads that are unneeded after construction.
3. Install locked gates across roads where practical, to control access.

Communication Site

1. Move the receiver out of the path of wind turbine and transmitting station.
2. Replace metal blades with non-metallic material; wood, fiberglass, and composite materials have fewer electromagnetic effects.

In the event that operation of a wind turbine resulted in harmful interference, the operator of the turbine should be responsible for eliminating the interference.

Wilderness

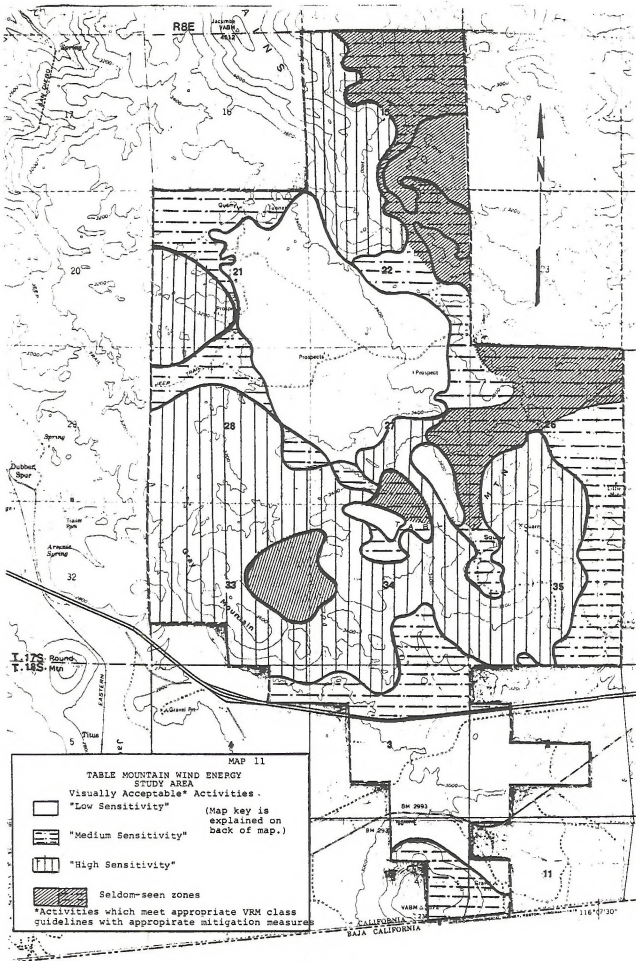
No mitigation is possible. Any development of wind energy facilities on the subject lands would impair the suitability of the area. Development of this area must be deferred until the status of the former WSA is resolved.

B. Visual Resources

Recommended Visual Resources mitigations are as follows:

1. Construct roads to follow natural landforms (curvilinear lines) rather than arbitrary straight lines.
2. Conceal roads by constructing them on the sides of ridges located away from the KOPs when possible.
3. Reduce the effects of deep road and tower pad cuts and fills by
 - a. limiting access roads to areas having slopes of 25% or less in the foreground distance zone of VRM Class II areas. (Windfarm development would not meet class limitations in these areas.)
 - b. limiting windfarm installations to areas having slopes of 25% or less in VRM Class IV areas and in the background distance zone of VRM Class IV areas.
4. Avoid "skylining" of turbine towers.
5. Paint all structures to match the characteristic landscape color. Since the landscape generally has a mottled appearance consisting of various shades of tan, desert camouflage would be the preferred paint scheme. A medium desert tan would be the preferred color if a solid color were used. Structures unavoidably skylined should be painted a light powder blue. All paint should be approved by BLM prior to actual application.
6. For power distribution lines (69 kV or smaller), use nonspecular conductors and insulators. If metal distribution line towers are to be used, ungalvanized metal weathering to a natural brown is preferred.
7. Avoid skylining of power distribution lines if possible.

Map 11, "Visually Acceptable Activities", depicts activity zones and the types of development activities within each which would meet applicable VRM Class contrast limits with appropriate mitigation.



MAP 11
 TABLE MOUNTAIN WIND ENERGY
 STUDY AREA
 Visually Acceptable* Activities.
 "Low Sensitivity" (Map key is explained on back of map.)
 "Medium Sensitivity"
 "High Sensitivity"
 Seldom-seen zones
 *Activities which meet appropriate VRM class guidelines with appropriate mitigation measures

The activity zones differ from the VRM distance zones because the visual contrast is a function not only of distance from KOPs but of topographic features as well. Thus, the map takes into consideration such factors as slope and the effect of "skylining", as well as distance from KOPs in determining whether or not an activity would meet contrast limits imposed by VRM classes when appropriate mitigation for color and other contrast features has been implemented.

C. Biological Resources

Vegetation

1. Conduct a botanical inventory of all proposed road and construction sites before work begins. No surface occupancy in those areas identified as containing plants named on Table 10.
2. Limit tower assembly areas to existing disturbed sites, such as the quarry in section 35.
3. Limit road construction to the minimum acceptable amount.
4. Prohibit all off-road vehicular travel.
5. Waterbar roads on grades over 75' long and 5% slope.
6. At the end of construction, barricade all roads not needed for maintenance.
7. Avoid construction of any facilities in areas shown on Map 5.

Wildlife

1. Minimize surface disturbance.
2. Close new roads to public use.
3. Do not allow surface disturbance within $\frac{1}{4}$ mile of gallinaceous guzzlers or other permanent water sources, if they occur.
4. If a guzzler or other water source is impacted, grantee must compensate with one in a new location.
5. Survey for mule deer, bighorn sheep, spotted bat (roosts), magic gecko, and San Diego horned lizard to provide site specific information for EAs on applications. Ungulate surveys should emphasize seasonal use and type of use (fawning/lambing, travel corridor, etc.).
6. Do not allow construction in fawning/lambing areas if these are found.

7. Do not allow construction from February - June within 1/2 mile of fawning/lambing area if found.
8. Do not allow development within 1/2-3/4 mile of cliff nesting areas and in foraging areas.
9. Transmission lines should not cross canyon mouths or ridge tops.
10. No construction is to be allowed near golden eagle nesting and foraging territories from January - July. This mitigation can be suspended if nesting activity is not observed by March 31 of a given year.
11. Powerlines are to be constructed according to raptor protection guidelines (Ondorff et. al., 1981), where applicable.
12. Avian mortality should be monitored.
13. General wildlife surveys should be done on a site specific basis to determine presence of wildlife species of special concern.

D. Cultural Resources

Project avoidance is the most effective mitigative device. The Bureau maintains a policy of mitigation through avoidance and project redesign. Large segments of the study area containing dense archaeological properties or sensitive Native American values should be avoided.

Denial of project development north of Interstate 8 is the main recommendation based upon cultural resource values. This statement stems from the widespread distribution and spectacular array of prehistoric properties and Kumeyaay heritage values. Prohibition of wind leasing north of the freeway extends to conflict levels A and B for both archaeological resources and Native American values. Project construction is largely unmitigatable, on the upper reaches of Table Mountain. No manner of mitigation exists which would offset impacts to the Native American community.

The general public stands to suffer significant losses through wind farm development. Educational and interpretive opportunities would be largely reduced by the presence of wind farms in the northern part of the project area. Data recovery, if implemented, would provide some educational value, but the integrity of setting would be compromised. The Table Mountain area would lose much of its utility as an outdoor museum and classroom. The area should be kept as a unit of study.

Future generations will pay the price for development today. The uniqueness and complexity of Table Mountain cultural resources dictate that the area should be maintained as it currently exists. Detail of project development north of the Interstate will leave future Americans with an important legacy. Maintenance of a pristine Table Mountain would serve as a tribute to our cultural heritage.

Additional prohibitions exist south of Interstate 8. Data recovery procedures from the Jacumba Discontiguous District are clear: significant values occur within its boundaries. Sites within the district contain massive quantities of data, despite impact from transmission line construction. The major base camps, SDI-7059 and 7060 should not be subject to additional impacts. These sites contain abundant archaeological data and possible Native American significance which can be best served through preservation.

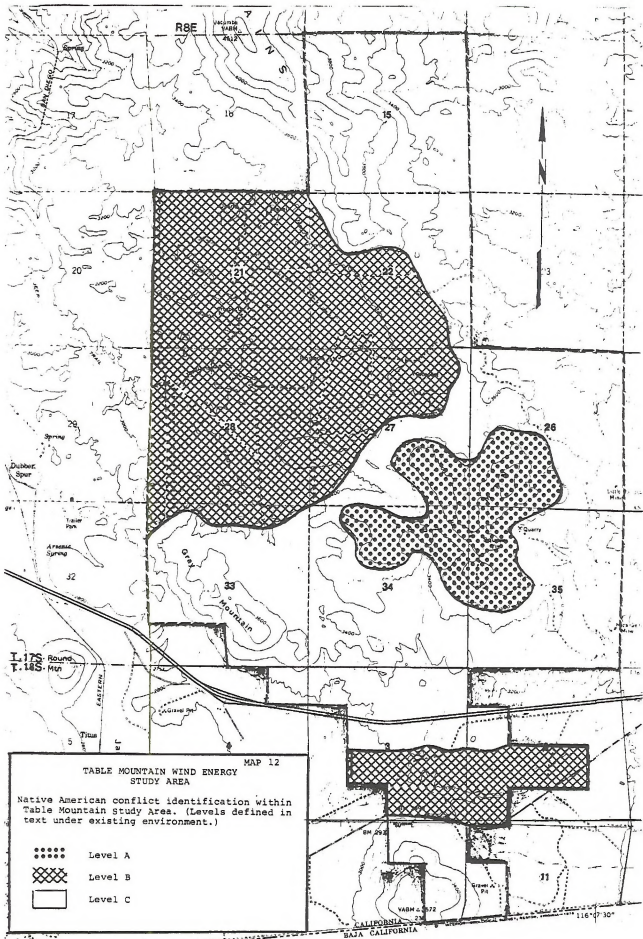
The following mitigative measures are offered should the decision be made to lease.

Project specific environmental assessments will be prepared, regardless of location. This will afford the applicant an opportunity to address site specific proposals and impacts. Individual environmental assessments will require an intensive Class III archaeological survey (USDI, BLM Manual 8100). Native American concerns must be addressed through supplemental contacts and interviews for conflict levels A and B (Map 12). Appropriate Kumeyaay Reservations should be contacted for possible input regardless of the lease location.

Additional stipulations exist. Contractors must hold a valid antiquities permit and follow permit special conditions for consultation within the California Desert. All archaeological work will follow section 106 procedures of the National Historic Preservation Act of 1966 as outlined in the Bureau's Programmatic Memorandum of Agreement (PMOA) with the State Historic Preservation Office (SHPO).

Initial inventory data will enable the proponent and BLM to determine relationships between project impacts and actual cultural resource distribution. Results of Class III studies may recommend one of several possibilities.

- 1) Project denial,
- 2) Project redesign,
- 3) Data recovery, or
- 4) Proceed with development.



LEGEND TEXT FOR MAP

Visually Acceptable* Activities



"Low Sensitivity"

Access roads, distribution lines (69 kV or smaller), and wind farms are acceptable with appropriate mitigation measures.



"Medium Sensitivity"

Access roads and distribution lines (69 kV or smaller), are acceptable with appropriate mitigation measures. Windfarms are not acceptable.



"High Sensitivity"

Access roads and windfarms are not acceptable. Distribution lines (69 kV or smaller) may be acceptable if roadless construction is utilized.



Seldom-seen zones. Development in these areas meet appropriate class guidelines without mitigation measures, but mitigation measures are recommended.

*Activities which would meet appropriate VRM class guidelines with appropriate mitigation measures.

Each of these options will be briefly discussed. Project denial is possible if new information or reliable survey data indicates the presence of outstanding archaeological or Native American values. Such places exist and may be exempted from consideration. Additional localities in undocumented portions of the study area may exist.

Project redesign is one manner to reduce or eliminate direct impact to cultural resource values. Access roads and transmission lines, for example, may be positioned to avoid sites. Some indirect impacts can be minimized through project design. Barricading of certain access roads would reduce visits and reduce the potential of site vandalism.

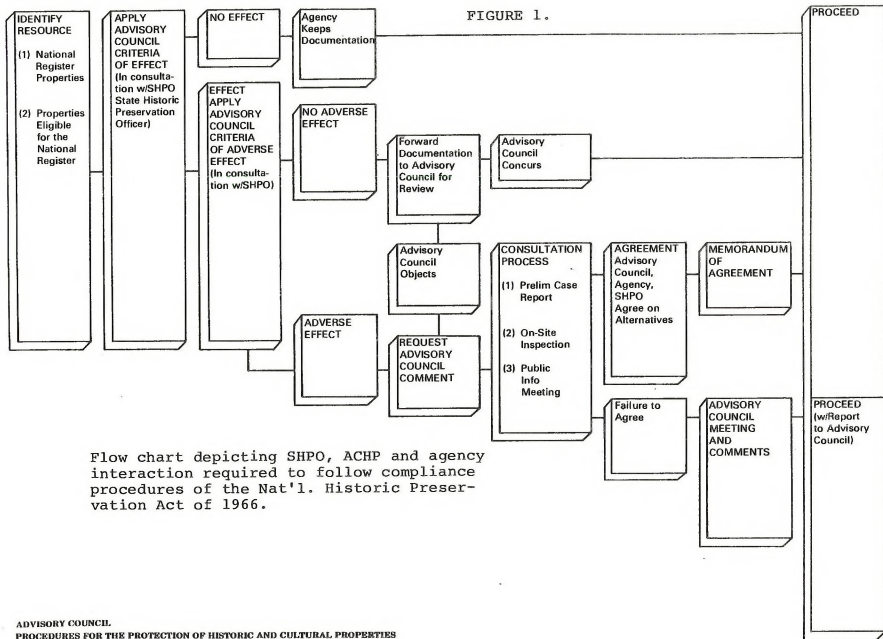
Data recovery is a possibility. Any form of data retrieval will be guided by an appropriate research design. Such a plan should follow guidelines in the Advisory Council's Treatment of Archaeological Properties (1980) and consider the range of contemporary problems and research issues available for study by Table Mountain cultural resources.

The research proposal should consider not only direct impacts, but also evaluate the entire site area. This approach eliminates or reduces biases inherent in conducting data recovery over only a portion of the resource. It is important for educational and interpretive purposes that the entire site content is sampled. Otherwise the data recovered from direct impact zones cannot be evaluated within a contextual framework.

Specific data recovery research proposals will be reviewed by BLM, SHPO, and appropriate professional archaeologists, organizations, and institutions. BLM, however, retains final approval for any research design. Finally, data recovery plans will include Native Americans in all phases.

The Bureau's compliance efforts under the National Historic Preservation Act require comment since National Register properties may be affected. The implementing federal regulations under this act occur in 36 CFR 800. Procedures are summarized in the procedural flow chart (Fig. 1). Standard case work within the California Desert District follows guidelines established by the above mentioned PMOA with SHPO. The Bureau's compliance efforts to mitigate a impacts to resource values can be met if SHPO agrees to Determination of No Adverse Effect. This is often achieved through implementation of an approved data recovery plan. The Council is provided with an informational copy for comment. The PMOA contains allocations for 30 day comment periods for SHPO.

FIGURE 1.



Flow chart depicting SHPO, ACHP and agency interaction required to follow compliance procedures of the Nat'l. Historic Preservation Act of 1966.

Controversial cases can be raised to the Council for comment (Fig. 1). If a situation arises that the Bureau and SHPO cannot agree on a "No Adverse Effect" procedure, then the Advisory Council may become involved. These procedures are outlined in 36 CFR 800.6. This process can be involved and lengthy since a preliminary case report is prepared, an on-site inspection may occur, and a public information meeting is possible. Time frames are not specified in 36 CFR 800, but the process becomes very time consumptive. Final determination of project implementation, however, rests with the federal agency.

V. UNAVOIDABLE ADVERSE IMPACTS

The following section analyzes Alternative One's unavoidable adverse impacts after applying all mitigation exclusive of no leasing.

Recreation

Depending on the area or areas to be leased, a number of unavoidable adverse impacts to recreational activities could occur. Impacts to wildlife habitat or botanical resources could reduce the areas value for hunting or botanical sight-seeing. Restrictions to public access in order to protect structures and facilities from vandalism could result in closure of certain areas currently available to recreational users. Reductions in scenic quality due to new road and facility construction would reduce the quality of the recreational experience for some users.

Range

At least a slight reduction in forage is unavoidable. The amount of forage lost could be small enough that it would be unnoticeable. Under maximum development, the loss could be as great as 30 AUM's of forage.

Wilderness

Development of the former Table Mountain WSA for wind energy would result in impacts which would impair the suitability of the area for wilderness designation, in violation of a U.S. district court injunction.

Visual Resources

Even with mitigation, windfarm development within the foreground distance zone of VRM Class II areas would create contrasts in excess of acceptable class limits. Though contrasts could be reduced to acceptable levels in other areas, contrasts would nevertheless occur. While these contrasts would not be readily evident in the overall landscape from key observation points, they would result in a reduction in the overall scenic quality of the area. Development within the seldom-seen and background zones would create a significant reduction in scenic quality for the relatively small number of hikers and off-road vehicle recreationists who enter these areas. The viewshed from some remote portions of Anza-Borrego Desert State Park would also be adversely affected by wind energy development on adjacent BLM lands.

Vegetation

The destruction of vegetation along all new roads, at the rate of 3 acres/mile of road, and at all turbine sites, at the rate of 17 turbines/acre, is unavoidable. The degree of overall disturbance is dependent on the intensity of development.

Wildlife

Wildlife of special management concern may be impacted; the type and severity of impacts will depend upon the location and degree of development. Habitat loss will reduce wildlife population levels and may reduce species diversity. Individuals will be killed or injured due to crushing, collision, or electrocution. Wildlife and wildlife habitat will be subject to increased disturbance from increased human access.

Cultural Resources

Full or partial development contains the possibility of jeopardizing cultural resource values. Archaeological sites and Native American concerns will be violated through project development. The area north of Interstate 8 currently possesses high levels of integrity. Development could permanently alter this situation. Finally, as noted earlier, the very act of data recovery constitutes an adverse impact to the resource being mitigated.

VI. CONSULTATION AND COORDINATION

In order to adequately address wind energy resources and their possible development, BLM consulted with and/or requested information from the following persons, groups and agencies:

Federal

Bureau of Land Management
J. Mason, Ranger
T. Russi, Biologist

Bureau of Reclamation
J. Rorabaugh, Biologist

State

Anza-Borrego Desert State Park
M.C. Jorgenson, Naturalist

California Department of Fish and Game
J. Brode, Biologist
G. Laret, Warden Captain
H. McKenzie, Biologist
W. Powell, Warden Lieutenant
R. Turner, Warden
F. Worthley, Regional Manager

California Energy Commission
Michael Batham, Wind Energy Program Manager
David Waco, Meteorologist

County of San Diego

Board of Supervisors
Fish and Wildlife Advisory Committee
R. May, Dept. of Planning and Land Use
T. Oberbauer, Dept. of Planning and Land Use

Indian Reservations, Agencies and Individuals

Reservations

Barona
Campo
Cuyapaipe
Inaja and Cosmit
Jamul
La Posta
Manzanita
Mesa Grande
San Pasqual
Santa Isabel
Sycuan
Viejas

Agencies

So. California Tribal Chairman's Assn.
Native American Heritage Commission

Individuals

Rosalie Robertson
Fern Southcott
Tom Lucas
Raymond and Katherine Lobo
Steve Esquibel
Verra Brown
Ronaldo LaChappa
Bill Coleman
Joyce Redding

Educational Institution

San Diego Museum of Natural History
Linda Allen, Botanist
San Diego Museum of Man, Ken Hedges

Special Interest Groups

San Diego Audubon Society
San Diego Chapter of the Sierra Club
CA Wilderness Coalition
San Diego County Fish and Game Assn.
San Diego Mineral and Gem Society
San Diego County Archaeological Society
San Diego Chapter of the California Native Plant Society

Development Interests

California Wind Energy Systems
Global Access, Ltd.
Lane, Hannibal, Lund
Pacific Wind Systems
Turbowind
Ventana Group
Wind Power Systems
Ken Bosley

Individuals

Mitchell, Beauchamp, Biological Consultant
Eric Johnson
James Kemp, Grazing lessee
Richard McCain, Grazing lessee
Lorraine Pritchell, Biological Consultant
Susan Vergne, SDG&E Environmental Analyst

PUBLIC COMMENT LETTERS

The following is a chronological listing of comments received on the Draft Environmental Assessment. Following each comment is BLM's response.

<u>Number</u>	<u>Commentor</u>	<u>Page</u>
1	Gilmer G. Boggs	81
2	Ronald V. May	83
3	Archaeological Survey Assn. of Southern California	88
4	Nadine Zelenka	90
5	San Diego County Archaeological Society, Inc.	92
6	Westwind Electric, Inc.	96
7	Imperial Valley College Museum	107
8	University of Wisconsin- Parkside	109
9	The Desert Protective Council	124
10	Mountain Defense League	128
11	San Diego Gas and Electric	130
12	San Diego Chapter of the Sierra Club	133
13	Virginia Landis	135
14	Jan Townsend	137
15	Harriet Allen	140
16	County of San Diego Dept. of Planning & Land Use	143
17	Ken Bosley	147
18	Advisory Council on Historic Preservation	152
19	Association for Transpersonal Anthropology International	157
20	Imperial Valley College Barker Museum	162
21	The Resources Agency of California	164

717 Sunflower Street
Encinitas, CA. 92024

January 28, 1984

BLM El Centro Resource Area Office
333 South Waterman Ave.
El Centro, CA 92243

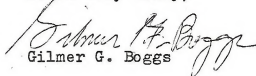
Gentlemen:

Once again I wish to express my opposition to the proposed development of wind energy farms on Table Mountain.

1-1 I am adamantly opposed to any action that will desecrate the natural beauty of the Table Mountain area. Windmills would most certainly do that. In addition, they would impair the life of wild animals and rare plants. The many Native American sites in the area would also be damaged and destroyed by building roads necessary to erect and service wind energy equipment.

Moreover, why should the government be a party to political payoffs? Political pals and campaign contributors are the individuals and corporations that would profit. There is plenty of privately owned open space along I-8 ideally located for wind energy projects.

Yours very truly,


Gilmer G. Boggs

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Gilmer G. Boggs

COMMENT #

RESPONSE

1-1

Comment noted

January 31, 1984

Mr. Roger D. Zortman
 Area Manager
 Bureau of Land Management
 333 South Waterman Avenue
 El Centro, CA 92243

Dear Mr. Zortman:

Subject: Environmental Assessment on CA-14633, Wind Tower Development Proposal
 To Be Sited Atop Table Mountain.

Before going into the lengthy comments I would like to submit concerning this Environmental Assessment (EA) and the project, I would like very much to commend the admirable report written by Mr. Pat Welch of your staff in dealing with the archaeology and Native American values. Mr. Welch did an even better job on the nomination of the Table Mountain Archaeological District to the National Register, at a time when I could not commit the time or resources to assist him.

I would like to preface my comments with the recommendation to deny CA-14633, just as you denied CA-13973. I think it would have helped considerably for the reviewing public to know the rationale for denying the latter application and how it differs from the former.

2-1 If you elect not to deny the application, then I strongly urge you to initiate a detailed Environmental Impact Study and implement 106 Procedures with the State Historic Preservation Officer. This EIS will have to assess Native American values with personal ethnographic interviews with Kumeyaay leaders on both sides of the border of U.S./Mexico. Any discussion of "salvage" should only be made in the context of 100% micro-mapping recovery and barriers locking out recreational vehicles must be designed on all roads. Salvage by percentage sample is out of the question due to the importance of the National Register District and the fact that any surface artifacts in the area of the construction and maintenance crews will only serve to encourage them to engage in "recreational relic-collecting."

As you may have ascertained from my previous letters, I pick up "gossip" from BLM personnel and energy industry people. I have it on questionable authority that the comment "owing to a rigid time constraint" (cover page of EA dated January 25, 1984) refers to assurances from high in the Department of Interior to a Mr. Jerry Hull that the technical formalities of an EA and EIS will be dispensed with in short order and the project approved. Please ease my fears that this rumor is untrue and that you will honestly weigh all the pros and cons in an unbiased manner.

Your EA ought to be amended to include in "II. AFFECTED ENVIRONMENT A. Land Use Recreation" the educational field classroom the entire BLM holding around and including Table Mountain have offered the San Diego County Archaeological Society and associated schools to study the integral roles of archaeological sites with the native geography in which their makers exploited in the prehistoric past. There have been approximately 18 trips under my supervision and Antiquities Permits leading novice and student archaeologists out to learn professional field techniques and data recording. A strong emphasis upon these more than 300 people has been to leave the environment alone. It is still possible to take them out to the top of Table Mountain or within the Archaeological District and lecture about the Kumeyaay's ancestors without modern technological invasion into the experience. To study prehistoric sites in their natural setting, without

January 31, 1984

the drone of machinery is a wonder in these times. Yet, it is critical to teaching city people to comprehend how the Kumeyaay lived out in the environment.

My educational field trips began in 1975 and run two to three times a year. Students from SDCAS, as well as San Diego State University, Palomar College, Mesa College, and the University of San Diego have joined the project. This has resulted in many student papers and the training has oriented people into archaeology as a career. My research in the area has resulted in two publications and one large manuscript. One of the publications will come out this Spring at the CRM Center at San Diego State University.

While I know that Mr. Welch was instructed to keep all the Indian stuff in the cultural resources section, I believe that this is a bias which limits discussion of the available resources only to Anglo-American society. The "Minerals" section under land use really needs to discuss the relevance of the rocks and minerals to the Kumeyaay. The Kumeyaay were quarrying volcanic cobble clasts among the Table Mountain Gravel Formations all around the base of the Mountain for tool blanks. They hunted crystal and tourmaline from the pegmatite dikes, many of which were "turned-on" for their magical power properties and taken up to the various shaman's places within the area. We have found evidence of chalcedony "mining" from cracks and vugs in the face of the scarps of Table Mountain.

2-2 I was cautioned not to spend much time atop Table Mountain by Tony and Rosalie Pinto back in 1979. The top mesas were considered "sacred", although they would not divulge why. I am not privileged to learn these secrets. Romaldo La Chappa once informed me in Spanish and with Rosalie present in her home at Campo in 1976 that "good medicine" was performed by the old people atop Table Mountain. He, at that time, referred to the mountain as "Hwi-nip-shish", which I had him repeat several times to make certain I heard him correctly. Dr. Clyde Wood has not been able to get the same name/word from his informants for the mountain and I am at a loss to explain its meaning.

The cobbles all around the mesas served another purpose right up to the 1930's. The Kumeyaay from Jacumba and Jacumé, as well as Kamia and Kohuana from the desert, perhaps even some Cocopa from Mexico, gathered around and atop Table Mountain from March to June to harvest agave and yucca hearts and process them. The Table Mountain Formation Gravels provided elevated places with soft soils and numerous cobbles to construct the roasting ovens. It is why there is such a high concentration of agave roasting pits all around Table Mountain. The nearby camps and base camps probably are unique to Jacumba or Jacumé in that more specialized activities can be studied there in relation to these roasts.

The cobbles were also test-broken by Kumeyaay men to knap stone tools. Careful examination of the "scatters" of flaked stone tools within these ridges actually reveals subtle and distinct workshops where coring and reducing of the tool blanks were done. Some concentrations of tools indicate the processing of the agave and yucca prior to the roasts. Disruption of the thin layers of surface artifacts for roads would severely damage this story.

I assess the "road improvement" within the application right-of-way" to impact no less than ten significant sites such as discussed in the paragraph above; SDi-4576, 6798, 6799, 4950, 4951, 4952, 4953, 4954, and 4955. Any movement of bulldozers up the road to make it more traversable will damage these sites. Cutting of roads across the jeep tracks atop Table Mountain or grading of the three acres for building and laydown pads would be an atrocity.

3. I think that you are remiss in not extracting information from the old Sundesert Transmission Line study to explain why the alternate corridor down the east side of Table Mountain was not selected by SDG&E. It certainly would seem relevant in the context of this discussion.

2-3

4. I am especially surprised that you did not have an extensive discussion on the concept that the Sierra Club vs. Watt et al. litigation would become moot if the wind towers are up there breaking up the skyline. There is certainly a need to photograph Table Mountain from the 4000' elevation of the "Wilderness Study Area" and then ink-in lines depicting how the wind towers would look. Since the argument to take Table Mountain out of the Wilderness study was due to roads and the microwave stations, the wind towers would constitute a very significant impact. Has the Sierra Club's lawyers seen this EA?

5. I have driven down Interstate 8 and seen Table Mountain from about 5 to 8 miles west in the Walker Canyon area and certainly disagree with the "B. Visual Resources" write-up. You must take into account the stark contrast of the Jacumba Volcanics with the underlying soil mantle when you consider how the aesthetics will look after approval of the application. The scraped laydown area and tower pads will be visible for many miles, drawing attention to the towers where no attention exists today. You did not consider the "Scenic Highway" status that the landscapes around Interstate 8 have been given on the San Diego General Plan. Really not good to ignore land use categories of responsible agencies.

2-4

6. Similar to my comment on the minerals, "C. Biological Resources, Vegetation" is deficient in that it only considers Anglo-American and not Native American resource values. Kumeyaay did in fact harvest agave out there as late as the 1930's; supported by historic glass associated with roasting pits and Rosalie Robertson's statements. This, in fact, is a native gathering area and that point should be explored in ethnographic research should you decide to go into an EIS stage. Simple Latin descriptors of the flora and fauna is really not enough.

2-5

7. I think that you must recognize that "recreational relic-collecting" will occur as a result of the introduction of modern construction and maintenance crews at the towers. I have seen evidence of looting of rockshelters SDi-6780 and SDi-6781 adjacent to Interstate 8 and the modern trash left behind by the culprits included construction equipment. How will the BLM police all those folks, even if you lock gates on all the roads?

2-6

8. There should be a section on "education" in the recreation section which discusses the potential for long-term field classrooms such as the SDCAS and universities have done out there. Have you spoken to Drs. Minch and Abbott at San Diego State University to learn of their students use of the area for geologic mapping? Did you know that in 1979, Mrs. Katherine Saubel taught archaeologists how to roast agave out there and now there is an annual agave roast on the east side?

2-7

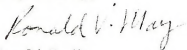
9. I think that the Advisory Council and the Keeper of the National Register ought to have received copies of this EA. It seems ludicrous that we just get the area on the NR after nine years of research only to have you propose to develop the area.

2-8

In conclusion, I would urge you to deny the application for CA-14633 and use this EA to support any appeal of your decision. There is ample evidence that this is not the right place. Your wildlife biologist informed me that the wind energy folks were misled to believe that Table Mountain was a high energy area with little or no environmental problems. I strongly suggest that you find out who told them this fantasy and reprimand that person. You people hold all my Antiquities Permits and copies of all the site records and have done so since 1975.

If you have any questions of me, you can call me at my office at 565-5627.

Respectfully,



Ronald V. May

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:
Ronald V. May

<u>COMMENT #</u>	<u>RESPONSE</u>
2-1	Comment noted
2-2	Comment noted
2-3	An extensive discussion of <u>Sierra Club vs. Watt et.al.</u> is not required, since the court's direction is clear. No activities which would fail to meet the nonimpairment criteria of BLM's IMP can occur within the former WSA while litigation is underway. The Table Mountain WSA was deleted from WSA status because it was under 5000 acres in area, not because of the presence of roads or microwave stations. The Sierra Club Legal Defense Fund did not receive a copy of the draft EA, but will be sent a copy of the final.
2-4	Comment noted
2-5	A BLM Compliance Officer would be assigned to monitor construction activities to insure compliance with stipulations set forth in the right-of-way grant(s). Also Ranger patrol would be increased.
2-6	Mr. Welch participated in the Agave roast alluded to.
2-7	Comment noted
2-8	Comment noted

BLM El Centro
Resource Area Office
333 South Waterman Ave.
El Centro, CA 92243

February 6, 1984

Gentlemen:

on behalf of the Archaeological Survey Association of Southern California, I would like to express our concern for the cultural and natural resources of the Table Mountain area, discussed in the "Table Mountain Wind Energy Programmatic Environmental Assessment". In the opinion of the ASA, the Table Mountain Region contains numerous significant cultural resources and areas which are known to have been sacred to the Native Americans. It is our hope that proper mitigation of all sites will be accomplished if any are in danger of primary and secondary impact. We stress that all sacred sites should be left undisturbed.

As an organization, the ASA has had a history of providing salvage excavation and survey work for numerous institutions in its 35+ year history. If volunteer surveying and site recording would be favorably received, then we hope that our services will be called upon.

I would like to suggest that copies of the impact reports which are reviewed through your office be distributed to public libraries in Orange County as well as San Diego County. Mrs. Kissinger, the Curator of History at the Anaheim Public Library, is grateful to receive these documents and have them available for public review.

Sincerely,

Nadine Zelenka

Nadine Zelenka
Archaeological Survey Association
of Southern California

Armocost Library, University of Redlands
Redlands, California 92373

3-1

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Nadine Zelenka, Archaeological Survey Association
of Southern California

COMMENT #

RESPONSE

3-1

Comments noted

RECEIVED					
Bureau of Land Management E. Oakes, CA.					
FEB 9 1984					
COPY	INITIALS	READ	ACT.	INIT.	
	AREA MGR. <i>BJ</i>				
	ENV. COORDINATOR				
	SUPV. OF ENV. CHIEF				
	RES. PROG. CHIEF				
	VISITOR SVCS. CHIEF				
	<i>Lynda</i>				
FILE				READER	

BLM
1695 Spruce St.
Riverside, Calif. 92507
attn. Lynda Kastoll

Dear Ms. Kastoll,

thank you for sending the BLM News Release to the Pacific Coast Archaeological Society, in care of Laurie Mitchell, regarding the "Table Mountain Wind Energy Programmatic Environmental Assessment."

If in the future you would care to direct such news releases to my address, or additional releases, I would be happy to distribute them to the PCAS members, as well as members of the Archaeological Survey Association. It has come to my attention that Ms. Mitchell is an extremely busy person, and with the short deadline provided for written comments, sometimes too few people are informed about the issues which require comments.

Please continue to send news releases to Ms. Mitchell, but please address additional copies to me. Thank you.

Nadine Zelenka, PCAS
P.O. Box 10926
Costa Mesa, Calif. 92627

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Nadine Zelenka

COMMENT #

RESPONSE

4-1

Comment noted



San Diego County Archaeological Society, Inc.

Environmental Impact Report Review Committee
P. O. Box A-81106 San Diego, CA 92138

February 8, 1984

To: Mr. Roger D. Zortman, Area Manager
Bureau of Land Management
El Centro Resource Area
333 South Waterman Avenue
El Centro, California 92243

Subject: Draft Environmental Assessment for CA-14633
Proposed Wind Energy Development of Table Mountain Area

Dear Mr. Zortman:

5-1 Less than two weeks ago, the San Diego County Archaeological Society received from your office a copy of the subject Draft Environmental Assessment, for review and comment. For some reason, only 15 days was allowed for the public review period, and emphasis was added that no extensions would be granted. Such a short review period for a project with the severe potential impacts of this one, especially as regards cultural resources, is hardly reasonable. We would appreciate some explanation of why the project is being rushed along by BLM. It is hoped that it is not indicative of a decision already made, a concern heightened by the statement, on page 71, that "In spite of cultural resource conflicts, it is a real possibility that wind energy development leases will be issued north of Interstate 8."

5-2 We noted with interest mention, on page 3, of a previously denied wind energy right-of-way application, CA-13973. While we applaud the denial, and urge similar action with CA-14633, we are nevertheless concerned that this was the first we had heard of the earlier proposal. An explanation of this earlier proposal and its history would be relevant to the current project, and should be part of the subject DEA.

5-3 Judging by the list of persons and organizations to whom the DEA, or notice of it, were sent, BLM has not provided Anza-Borrego Desert State Park and California Parks and Recreation personnel with copies to review for a project adjacent to state parklands. Such comment should be solicited and obtained prior to any decision on the project. The personnel communication between BIM's Lillian Olech and Anza-Borrego's M. C. Jorgensen does not satisfy this requirement.

5-4 Page 5 of the DEA cites the wind energy potential of Table Mountain. Where was this data, shown as Table 1, obtained? The 10 square mile project area varies considerably in terrain, and it seems reasonable to expect the wind speeds to vary greatly as well.

San Diego County Archaeological Society, Inc.

To: Mr. Roger D. Zortman, BLM El Centro Area Manager
Subject: Draft Environmental Assessment for CA-14633
Date: February 8, 1984

As it addresses cultural resources, the DEA is excellent, and presents a good picture of the nature of the resources and the severity of the impacts likely to result from the selection of either Alternatives 1 or 2. Our comments on those aspects of the DEA are rather limited:

5-5 (1) Both the 25-foot width for right-of-way and the 50'x50' area for the generation towers seem to be underestimations, and the associated power lines are not addressed in terms of surface disturbance on page 6.

5-6 (2) Page 77 says that "Alternatives 1 and 2 contain the possibility of jeopardizing cultural resource values." The preceding 76 pages have shown, beyond any conceivable doubt, that the first two alternatives contain an absolute certainty of severely impacting cultural resource values. And this section, pages 76-77, does not even address the unavoidable adverse impacts to Native American values.

The following specific comments are offered on the mitigation measures:

5-7 (1) While mitigation for impacts to minerals resources calls for not putting wind turbines at the quarry site, the mitigation for impacts to vegetation calls for limiting impacts to disturbed areas "such as the quarry in section 35". Do these measures, from pages 66 and 69, conflict?

5-8 (2) Mitigation for impacts to visual resources is apparently to try to keep unsightly features of the project in the so-called "seldom seen" areas. Such logic, carried to its ultimate, would achieve a uniform level of ugliness anywhere beyond the sight of persons riding along the highway in their vehicles. If the concept can be applied so as to move adverse visual impacts into already disturbed areas, it makes sense. If it results in writing off presently pristine areas, it does not. The "seldom seen" areas of this project fall into the latter category, especially since they are in plain view from the Table Mountain Wilderness Study Area.

5-9 (3) On page 71 of the DEA, it should be made clear, in the fourth paragraph, that the required archaeological survey would have to cover the entire project area in the case of either Alternative 1 or 2 being selected.

5-10 None of the three project alternatives under consideration in the DEA include possible alternate locations for the project, and omission which should be corrected.

5-11 Evaluation of the project's adverse impacts would be greatly facilitated by the development of a single composite map which would display all of the areas which are, for one or more reasons, subject to unmitigable impacts. We believe that the resulting map would clearly show the project must be denied by selection of Alternative 3. Indeed, given that the project area includes an ACEC, a National Register archaeological district, a second archaeological district which has been judged eligible for the National Register, a wilderness study area, and a National Cooperative Land and Wildlife Management Area, it is difficult to comprehend how either Alternative 1 or Alternative 2 could even be considered seriously. The DEA makes the case strongly and clearly.

San Diego County Archaeological Society, Inc.

To: Mr. Roger D. Zortman, BLM El Centro Area Manager
Subject: Draft Environmental Assessment for CA-14633
Date: February 8, 1984

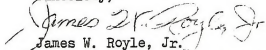
5-12

Page 38, for example, states that "The quality of Table Mountain archaeological data is not duplicated on other federal lands being managed by BLM for the public good." Page 41 quotes BLM's adopted Eastern San Diego County Planning Unit Management Framework Plan as calling for Table Mountain to be managed "as (an) archaeological reserve zone, restrict access and other uses." Page 44 quotes the National Register documentation, which was prepared by your office, as stating that "The Table Mountain District should be preserved for all generations." Neither Alternatives 1 or 2 meet these standards. If BLM meant what it said in the ACEC and National Register documents, it has no choice but to adopt Alternative 3. Even if it chooses to ignore the above, the basis for selection of Alternative 3 probably exists in the economics of mitigating adverse impacts to some 200 archaeological and historical sites. If the full leasing alternative is economically infeasible (see page 60, paragraph 1), the partial leasing likely also is, since extensive mitigation work must be accomplished but with a much reduced base for recovering the costs.

5-13

We strongly urge and request BLM to adopt Alternative 3. Any other action is inconsistent with BLM's duties and past actions and policies. Table Mountain is simply the wrong place for this type of development.

Sincerely,



James W. Royle, Jr.
Chairperson, EIR Review Committee

cc: SDGAS President
file

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

James W. Royale, Jr., San Diego County
Archaeological Society, Inc.

COMMENT #

RESPONSE

5-1	A short comment period was allowed for the DEA since this was a culmination of the process that began with a request for information, and since the DEA was distributed, in part to those who received requests for input, we assumed that SDCAS was familiar with the process and document. The EA makes no recommendations for decisions. A full 30 day public comment period will be held for the Draft Decision, however.
5-2	See page 3. CA-14633 is the serial number assigned to the FEA and ROD.
5-3	A copy of the DEA was sent to Jim Hendrix, Area Manager of Anza-Borrego Desert State Park. Other State agencies, including Parks and Recreation, were given the opportunity to comment through the State Clearing House.
5-4	This information was incorporated into the final EA.
5-5	These figures are a general assumption. It was further assumed that distribution lines would be located along the roadways. A site specific EA will be prepared by grantees prior to any activity.
5-6	Comment noted.
5-7	Text revised. See new Introductory paragraph p. 66 of FEA.
5-8	Comment noted.
5-9	Class III standards require complete examination of a property.
5-10 through 5-13	Comments noted.

FEB 10 1984



WESTWIND ELECTRIC, INC.
 2999 Oceanfront Walk, Suite C
 Mission Beach, California 92109
 (619) 488-7016

February 8, 1984

Roger D. Zortman, Area Manager
 Bureau of Land Management
 333 South Waterman Avenue
 El Centro, California 92243

Dear Roger:

I have just completed the review of the draft Environmental Assessment (EA) prepared by the El Centro Office of the Bureau of Land Management (BLM). Refer to CA-14633 2800 (C-067.26

My first reaction after reviewing the EA is its obvious bias in favor of special archaeological interest and against wind power development.

There is one paragraph under Purpose and Need on page one that describes wind power as non-polluting and renewable. The rest of the text attempts to indict wind development in every conceivable and imagined manner.

It may be helpful to view renewable energies (solar & wind) in a much broader scope. For instance, had this area utilized wind and solar on a mass scale sooner, there would not have been a need to construct the massive Southwest Power Link. In my judgment, those 150' lattice towers, slicing through the middle of the area, represents the single most negative environmental impact to the region, wind park development pales in comparison.

(approved)

Your office that 500 KV transmission line and now that line is creating a preponderance of negative societal impacts.

That power is currently being generated in the Four Corners Region, on Navajo Lands, in Arizona. It (coal) pollutes the blue sky and strips the soil to such an extent that you would think they were building enough housing pads to accommodate the population of Manhattan. The same feed stock causes rain to fall as acid, destroying plant life to such a degree that many specialists believe that if alternatives are not developed soon, our whole environment could be permanently damaged.

The continued use of the other fossil fuels will contribute to hydro-carbon contamination of every urban area in the country as well as encourage the use of the outer continental shelf for oil exploitation instead of marine animal and plant growth, damaging our food chain permanently.

(possibly)

Finally, that line was also developed to bring power from another fuel

one

ZORTMAN LETTER continued

source at Palo Verde. That technology has already spoiled Three Mile Island for an indefinite period of time and its status in the energy industry is an accident waiting to happen.

So when informed individuals discuss energy options, most agree that renewable energies (wind & solar) are benign to the environment and should be encouraged wherever they can be harvested.

6-1 Much attention has been focused on the visual impact of turbines in your EA. The facts are, marketing research does not support your concern. The truth is, most of the public views wind turbines and clusters of wind turbines (wind parks) in romantic, aesthetically pleasing terms. Most of this same public views Table Mountain and the In-Ko-Pah Area as a rock pile of little interest to them, I do not happen to share that belief. In-Ko-Pah County Park closed down due to a lack of use.

The question is how then, is this public land best utilized? Shall it remain the exclusive domain of a few archaeologists and a handful of amateur diggers, poorly managed, plagued by vandalism and non-self supportive,,, or should the land be jointly shared by archaeological interests and wind developers who can manage the property appropriately as well as contribute approximately \$165,000 per year to the BLM and a similar amount to the County of San Diego?

To me, the answer to the options posed above seems quite clear. However, we have never had an opportunity to discuss potential conflicts and work out compromises because the archaeological community refuses to meet with us, even after repeated overtures from our side.

I personally find this "ignore us and we will go away" tactic poorly conceived. Our organization has more than \$100,000 invested in this project and we do not intent to quit now.(and years of my time).

We have the strong support of Congressman Hunter, who represents the district in which Table Mountain is located as well as the County of San Diego and SDG&E.

We met with the State BLM Director in Sacramento, because we had strong staff support, regarding the project, the Director committed the BLM to leasing the right-of-way grant to us by the end of February, 1984. It is now the begining of February and we are no closer to obtaining a grant than we were in February of 1982.

Our new focus will be to gain media attention and public support for the project. This letter will be circulated to various sources in

two

ZORTMAN LETTER continued

hopes that they will rally to our cause and let public opinion judge the appropriateness of our project and your conservatorship of their land.

6-2 We also continue to be astonished by your treatment of the Ken Bosley application. His was never a serious application, but your continued encouragement has prompted him to approach us on numerous occasions and propose to withdraw his nuisance application for a fee of \$100,000.

6-3 I am very concerned that you required us to go through a competitive bid situation on Table Mountain after we had already spent a year determining its potential. I compare that policy to a prospector who spends a year looking for gold and when he discovers it, he publishes the location in the "Wall Street Journal". Everyone who is then interested files a claim and it goes to the highest bidder. There would not be many gold prospectors under that system and there will not be many wind prospectors either.

6-4 I later found out that this BLM District, under similar circumstances in Tehachapi, awarded a whole section of land to Wind Energy Company (Bill Mazzilli) without a competitive bid.

6-5 However, what disappoints us most is the gross conflict of interest contained in the EA. I refer to the original Congressman Duncan Hunter Letter of July 18, 1983. On page four, paragraph four, I identify letters (document k), written by Ron May, which libel our organization and make outrageously non-factual statements. Additionally, in the same paragraph of that letter (document l), I produce a newsletter that encourages interested parties to contact Pat Welch for information on how to protest wind development on Table Mountain. You can imagine how shocked I was when I examined the draft EA and discovered that the staff responsibility for archaeology and Native American Values was Pat Welch and your consultant was Ron May.

We do not feel that we have been treated fairly by the BLM.

The following comments relate to specific details in the EA.

6-6 Under Background on page six it implies that Table Mountain is but one of four sites in San Diego County. If you would have included the conclusion of that document, an entirely different meaning would have been conveyed. It states that "Only In-Ko-Pah and Table Mountain Area appears to possess sufficient acreage and freedom from environmental restraints to rank as a major wind resource area". The In-Ko-Pah Area MRI makes reference to is in Imperial County, making electrical grid interconnection with SDG&E prohibitive. Table Mountain is the only San Diego County wind park resource area.

three

ZORTMAN LETTER continued

Under Issue Identification on page three, the National Register of Historic Places designation does not preclude multiple land use, including wind developing.

6-7 Under Proposed Action and Alternatives on page six, turbine pad size is not fifty feet by fifty feet but ten feet by ten feet.

6-8 Under Communications Sites on page eleven, avoidance of the communications towers is the obvious mitigation. The blades are fiberglass and cause no micro-wave interference.

6-9 Under Wilderness on page eleven. First, WSA is a non-issue, we are not interested in that area. Secondly, I spoke to Andy Wiessner, Legal Counsel to the Public Lands Sub-Committee in Washington and he believes the Sierra Club will lose their legal battle on this issue because the area is less than 5,000 acres, releasing WSA status at Table Mountain. None of the three current wilderness bills in the Congress include Table Mountain. (protection)

6-10 Under Map 7 on page thirty-four. According to the map approximately 80% of the archaeological survey was non-systematic and done by a non-professional group. No professional assessment has been done on wind property north of the freeway. How can factual statements be made about the cultural resource in the wind zones?

6-11 Under Native American Environmental Perspective on page thirty-six. The statement "There is, literally, no other place like it (Table Mountain archaeological record) in southern California" is void of any factual basis. I was under the impression that the EA was a scientific document, not a travel agency brochure.

6-12 Under Inventory Results on page thirty-seven. Base camps can be found in every section of San Diego County and would not preclude wind development in the area.

6-13 Under Table 8 on page thirty-eight. It appears as if you removed one set of numbers (Roasting Pit Density) so you could say what you wanted to say. If you include the roasting pit numbers, the V-C Site would have a greater density than the MT Site.

6-14 Under Research and Significance on page thirty-nine. No one questions the need to devote time to finding out about our past. I have lived in San Diego County for forty-two years and have a keen sense of its past. I have participated as an undergraduate in field digs, both in archaeology and anthropology. I am also a member of the Sierra Club, Vice President of the Board of Directors of the Ecology Centre and have a long history of political action for environmental issues.

However, let us put the archaeology into perspective. There has already four

ZORTMAN LETTER continued

been significant work completed in linking the areas past to the present and it should continue. Nevertheless, there are many more important issues confronting this area other than finding out what early Native Americans dined on. This is a land use issue, important archaeology should continue, wind development should be allowed to go forward as quickly as possible.

6-15 Under Management Actions on page forty-one. Wind development would protect the security of the cultural resource. Currently ~~no~~ one protects the area from vandals.

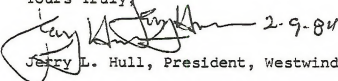
6-16 Under Native American Value on page forty-five. The reservations in the area (Manzanita, La Posta & Campo) have all had wind assessments completed on their respective reservations. None of the three reservations objected to developing wind parks on their own reservations, if fact, they were quite disappointed to learn the wind speeds were not strong enough to justify the wind park development.

6-17 Under Wilderness on page fifty-two. The former WSA is not included in the wind development plans of this organization.

6-18 Under Visual Resources on page fifty-two. Visual impact has inalterably been negatively impacted by the 500 KV transmission line running through the middle of this area, a discussion about wind park visual impact pales in the comparison.

6-19 Under Cultural Resources on page fifty-eight. How could wind farming be out of character in the best wind regime in the county? How could construction of roads and wind turbines constitute destruction of property, it looks like 1984 doublespeak?

Yours Truly,

 2-9-84
Jerry L. Hull, President, Westwind Electric, Inc.

NOTE: Attached information is on wind turbine we plan to utilize.

Attached are comments from our environmental contractors, Southwest Research Associates & Graves Engineering.

five

COMMENTS ON DRAFT ENVIRONMENTAL ASSESSMENT FOR
THE TABLE MOUNTAIN STUDY AREA
WIND ENERGY DEVELOPMENT

Recreation, Minerals, Power Transmission Corridor, Wilderness Range, and Communication Site

I have reviewed these categories and have no further comment at this time. The issue of fencing turbine areas and effects on cattle grazing, and recreational use will need to be further analyzed once a specific project is proposed.

Biology

Page 31, Map 6: Legend needs to be clarified. Errata Sheet shows same symbol for raptor use area as study area.

6-20 The biological study is fairly comprehensive in describing vegetation communities and associated wildlife habitats. I agree with their initial comments that site specific analysis will need to be done to determine the full scale of impacts and recommendations of suitable mitigation measures. However, it appears that without further site specific studies, some concerns are overstated.

6-21 For example, much emphasis is placed upon potential impacts to three plant species that have been listed as "candidates" to the Federal Endangered Species List. These species require further study (population dynamics, genetics, vigor, distribution, etc.) to determine how sensitive they really are as they currently have a low to moderate CNPS rating code.

6-22 Potential impacts to wildlife such as golden eagles and other raptors are more of a concern and cannot be easily mitigated. Table 6, Page 26, needs to be clarified to include the local (Southern California) status of species that appear on the various lists. For example, populations of scrub jay are doing quite well locally. On the other hand, the status of many species of bats is undetermined which should be more fully discussed.

6-23 The discussion of possible noise impacts to wildlife (page 55) needs to be tempered as noise levels generated by the "wind electrical generators" has not yet been examined.

6-24 The mitigation measures will need to be refined per project specific impacts. Close coordination with BLM staff on scope of biological survey work will need to be done. Overall, integration of various mitigation measures of different issues will need to be achieved. For example, page 69, under the Wildlife category, mitigation measure #2, appears to be in conflict with mitigation measure #2 under the Recreation category, page 66.

Visual Resources

6-25

BLM has an extensive classification system for management of visual resources. In general, large areas to the north of Interstate 8 have a higher visual sensitivity rating than areas to the south as less "cultural intrusions" have occurred in northern areas. These areas will have to be carefully evaluated as these areas also appear to contain the more desirable wind turbine locations. The information contained in the report is very comprehensive and will help analyze future specific projects. I have no further comments.

Comments on: BLM Draft Environmental Assessment for the Table Mountain Study Area, Wind Energy Development; January 1984

- 6-26 1. Approximately 55% of the study area has been surveyed by archaeologists. The BLM report states that the reliability of the surveys vary considerably as to their accuracy; in fact, "Each of these studies may have missed cultural resources (BLM, 1984:35)." What is BLM's estimate of the total amount of land examined by qualified archaeologists with reliable, quantifiable results? How much validity can be placed upon the SDCAS surveys, considering their use of untrained personnel?
- 6-27 2. The third paragraph on page 36 is a value judgement unsupported by facts. There may exist other areas in environmental transition zones that are similar to Table Mountain which have not been as thoroughly explored by professional archaeologists. Please explain the justification for the statement.
- 6-28 3. More detail is needed regarding the site density analysis presented on page 38. Explanations/definitions need to be provided for the difference between total site density and actual site density. Unless the reviewer has a copy of the Cook and Fulmer report referred to in the text, it is impossible to analyze this section of the draft EIR without additional information.
- 6-29 4. Are radiocarbon dates available in association with the subsurface tests which have been conducted on sites in the area? What is the factual basis for the statement that ". . . some Table Mountain sites contain significant archaeology buried below the ground? (BLM, 1984:39)." What exactly is the definition of significant. Just because an archaeological site has a cultural deposit (depth) does not necessarily mean that the site is significant.
- 6-30 5. Site avoidance is a feasible possibility as a method of preserving cultural resource data. Access roads, power lines, and windmill towers can all be provided without impacting the physical integrity of sites through a systematic survey of potential windmill locations, and avoidance of those locations where impacts are anticipated to occur. This was not discussed in sufficient detail in the draft environmental assessment.
- 6-31 6. Given the dearth of archaeological data in the San Diego region as a whole, it is not surprising that Table Mountain is listed on the National Register of Historic Places, nor that the Jacumba Discontinuous District is considered eligible for the register. Very few places in San Diego County have commanded the attention the extent to which Table Mountain has. While its importance is recognized, it is not a valid argument to state that due to the range, complexity, and diversity of research questions available for study that Table Mountain is a unique archaeological entity. Until such time as more data is available, this is a statement which is not based on fact.

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:
Jerry L. Hull, Westwind Electric, Inc.

<u>COMMENT #</u>	<u>RESPONSE</u>
6-1	Comment noted
6-2	Comment noted
6-3	Comment noted
6-4	Comment noted
6-5	Comment noted
6-6	No apparent justification or data was contained in MRI's report to support their conclusion that the Table Mountain area is free from environmental restraints. Mention of Inkopah has been deleted from document.
6-7	See Response #5-5
6-8	Comment noted
6-9	Comment noted
6-10	While the SDCAs cultural resource survey is not systematic, inventory data has been verified by repeated field visits. The existing data base is accurate as to the identified resources. Additional, systematic inventory may reveal previously undetected sites.
6-11	Comment noted
6-12	Comment noted
6-13	Reasons for deleting roasting pit density estimates are provided with the note which accompanies Table 8.
6-14	Comment noted

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:
Jerry L. Hull, Westwind Electric, Inc. (Con't)

<u>COMMENT #</u>	<u>RESPONSE</u>
6-15	Comment noted
6-16	Comment noted
6-17	Comment noted
6-18	Comment noted
6-19	The EA describes in detail anticipated direct and indirect impacts.
6-20	Comment noted
6-21	Comment noted
6-22	Comment noted
6-23	Comment noted
6-24	See response to comment 5-7.
6-25	Comment noted
6-26	Each survey within the study area was designed to fulfill different goals. Methods and techniques varied accordingly. The Bureau believes that each project recorded resources if they were encountered. Only the Wirth (1981) study conforms to Class III standards. SDCAs survey is assumed to be quite valid.
6-27	This paragraph refers to environmental and not cultural factors. According to the Strand (1962) geologic map, Table Mountain represents the only occurrence of volcanic andesite along the Penninsular Range.

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:
Jerry L. Hull, Westwind Electric, Inc. (Con't)

COMMENT #

RESPONSE

6-28

See Response 6-13. Copies of the Cook and Fulmer report are available from the Government Printing Office.

6-29

Ron May has obtained a date of 380 + 60 B.P from SDi-9319. The significance and importance of subsurface archaeology is described immediately below Table 9.

6-30

Comment noted

6-31

Comment noted

FEB 10 1984

IVC. MUSEUM SOCIETY

February 9, 1984

BLM El Centro
 Resource Area Office
 333 South Waterman Ave.
 El Centro, Ca. 92243

Re: Table Mountain Wind Energy Site

Dear Sirs:

In response to your invitation for public comment on the environmental effect of development of wind energy on Table Mountain, I wish to express our strong opposition to any such development for the following reasons:

1. Table Mountain has several important archeological sites which should be preserved and studied.
2. Table Mountain is sacred to the Kwaaymii Indians. Their religious rights should be respected.
- 7-1 3. This mountain is the nesting site for at least one pair of eagles. We observed the successful rearing of one brood to maturity in 1980. This nesting site must be protected.
4. A large amount of private land is available nearby for wind development making use of public land unnecessary. One such site is in operation on the Tecate Divide adjacent to Tierra Del Sol Road just south of Highway 94.

We strongly urge that Table Mountain not be developed for wind energy and that every effort be made to preserve this important archeological, historical and wild life area.

Very truly yours,



William V. Arnett, President
 IVC Museum Society

SERVING IMPERIAL COUNTY

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

William V. Arnet, IVC Museum Society

COMMENT #

RESPONSE

7-1

Comments noted

FEB 10 1984

LETTER #8

University of Wisconsin—Parkside

Kenosha, Wisconsin 53141

Telephone: AC 414 553-2658



Division of Behavioral Science

January 31, 1984

Mr Roger D. Zortman, Area Manager
Bureau of Land Management
333 South Waterman Avenue
El Centro, Ca. 92243

Dear Mr. Zortman:

Overall, I find the draft EIA inadequate in its review of cultural resources, understanding of American Indian concerns, approach to the religious rights of American Indians as existing under P.L. 95-341 (American Indian Religious Freedom Act), and lastly in its study and understanding of the biotic resources of the Table Mountain region in relation to the proposed use for wind energy development. A detailed discussion of my objections as listed below (except E) will be found in the attached manuscript.

The EIA is inadequate for the following reason:

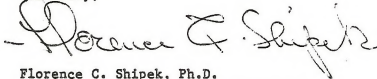
- 8-1
- A. It does not adequately address Kumeyaay concerns which include the following:
1. The sacredness of Table Mountain as a home of God and his spirit helpers for Sun Solstice ceremonies and healing ceremonies.
 2. Sacredness and inviolability of cremation areas which surround the mountain.
 3. Potential Future Use of younger Kumeyaay as a Sacred Area and for Gathering herbal medicines and plant foods.
 4. Present Kumeyaay use of and need for the area for plant gathering. Lack of understanding of past uses which brought non-native plants to the region
- B. Lack of understanding of the causes for "apparent contradictions" in group interviews with Kumeyaay and with information received from Wood (1982).
- 8-2
- C. Potentially inadequate archaeological studies of the region and inability of local institutions to provide adequate archaeological mitigation in relation to Kumeyaay concerns as well as scientific concerns.
- D. Biological Concerns -lack of sufficient study of medicinal uses of plants of that region.

8-3

E. An additional objection to the Table Mountain wind energy development, is that at present, I find the use of Table Mountain both redundant and unnecessary in the same region as the already existing Tierra Del Sol Road wind energy farm development (Boulevard-HiPass region) which remains unused and unconnected. The Tierra Del Sol development is on private land and should be in use and tested before any public land in this same region is modified for this identical purpose. Unless the existing wind farm is demonstrated as functioning and economically practical, no reason exists to modify the environment to develop another wind farm in this same region - subjected to the same winds.

As I have previously informed Pat Welch, I am always available to review both EIA's of this nature and the various Cultural Resource Inventories for the Southern California region in order to determine their adequacy in relation to the archaeology, ethnohistory and Native American concerns. This region is my area of expertise and I have no interest in bidding on contracts - my interest is in seeing that adequate results are developed.

Sincerely,



Florence C. Shipek, Ph.D.
Associate Professor of Anthropology

Response
to
Table Mountain EIA

This response addresses several inadequacies present in the "Table Mountain Draft Environmental Impact Assessment" (EIA) prepared by the El Centro office of the Bureau of Land Management.

A. Native American Concerns

1. Table Mountain: Kumeyaay Sacred Area

Table Mountain is a Kumeyaay Sacred Site, therefore the Mountain comes under the provisions of the American Indian Religious Freedom Act, P.L. 95-341. Any other use or proposed development of that area must be examined in relation to the effect of that development upon the religious beliefs and rights of the Kumeyaay. Secular activity will destroy the sacred nature of the mountain thus interfering with their religious beliefs and practices.

My research indicates that Table Mountain is a sacred mountain. In the past only tribal leaders (Kwaipai and Kuchut Kwataay) and priests or medicine men (Kuseyaay) went up on the top. The mountain is one of the few surviving, undeveloped, potentially undamaged, locations for Kumeyaay observation of the solstices, as well as the location for solstice ceremonies which were performed on the top by the leaders and kuseyaays. Also, around the base of the mountain the rest of the people assembled to perform the lay part of the appropriate ceremony.

In the Kumeyaay religious belief system, sacred mountains such as this, are the home of God and his spirit helpers, that is, the home of the appropriate spirits for the ceremonies held here. God is present for the

Solstice Sun ceremonies. His helpers who are in charge of healing live here, and are therefore present during the healing ceremonies held on this mountain. According to living Kumeyaay, when a major illness affected a great many of the people, all the Kumeyaay bands and all their Kuseyaay assembled here. Thus large congregations of people were here fairly regularly - both for solstice ceremonies and for healing ceremonies (as well as for a variety of economic activities). The Kuseyaay went up on the mountain to confer both with the spirits and each other to determine the appropriate ceremonies and medicines to use to heal the diseases among the people. Then they would then come down to perform the healing ceremonies on the lower slopes.

Kumeyaay religious beliefs would be disastrously damaged if secular activities took place on the mountain top or immediate slopes. Continual secular activity completely destroys the sacredness of the location and causes God and the Healing Spirits to leave the location.

2. Concern for Cremation Areas

In relation to the sacredness, the Kumeyaay have also indicated that a large number of cremation grounds surround the base of the mountains due to this use for healing purposes. In their religious beliefs, cremation areas are scared and must not have secular activity nearby. The spirits of the dead will be disturbed and return to earth, painfully hurting from the secular activity which disturbed them. These spirits will come after the living Kumeyaay demanding ceremonies to enable them to return to the spirit world and also demanding expensive removal to another non-secular location.

3. Potential Future Use

While elders have been interviewed about the past, a major segment of the Kumeyaay population has been ignored. A great many middle aged and young Kumeyaay continue to believe and practice the traditional Kumeyaay religion and to train their children in this religion. They are interested in maintaining the sacred mountains because they still believe that these mountains are the earthly homes of God and his Spirit helpers. Secondly, they are also interested in the continual use of Kumeyaay medicinal herbs and traditional foods. They have been taught herbal and food use by their parents and grandparents and desire to continue to use the traditional foods and medicines of their culture. Herbs and food plants may only be gathered in areas away from continual human activity such as the Table Mountain region and its environments.

4. Biological- Native American:

a. Kumeyaay Plant Use

An issue that was not addressed in the EIA was the Native American use of the existing (surviving under the impacts of grazing) vegetation. Many Kumeyaay still make use of a variety of herbs and plant foods which are found in that area. Due to its isolation from general human activity, the Table Mountain region has been one of the few locations which are still available for Kumeyaay gathering because plants may not be gathered from regions that are regularly frequented by humans. Plants in such areas are considered to be contaminated by the human activity. Some varieties of plants have totally disappeared in other regions of Southern California. Over the past 20 years, development has occurred in many regions formerly used by the Kumeyaay - leaving this as one of the few available areas for gathering specific herbs. If need be I will send a

list of those which I already know which the EIA lists as present in that area. Because in the past, access to desert areas has been relatively limited, further ethnobotanical studies should be conducted at this time.

b. Non-Native Plants - Source of

The plants identified for this area which are not native to the Southern California desert-mountains should be studied in relation to their use by Kumeyaay, Quechan, Mohave, Pima and Cocopa because these plants were undoubtedly planted in this location by the Native American for use. My ethnobotanical studies (Shipek 1977, 1981) indicated that plant specialists moved desired useful plants throughout the landscape - by transplanting, vegetative cuttings, or planting seeds. The other tribal ethnobotanical uses must be examined because this was the location for major tribal gatherings and intertribal interaction with related tribes. Therefore, these other tribes may have brought specific desired plants to this location.

B. Concerning "Contradictions" in Kumeyaay data

Regardless of the subject of the interview, several facts about the Kumeyaay socio-political organization, world view, and language structure must be thoroughly understood and used in order to successful interview most Kumeyaay tribal members. Contradictions will appear to be present in any group interviews and also in individual interviews unless certain procedures are followed and the reasons and need for them understood. Experience or special training in interviewing Kumeyaays is essential in order to interpret the results of any interview or set of interviews. It is necessary to understand the interplay of a number of factors in order to understand and interpret the Kumeyaay culture and the differing results of interviews with several Kumeyaay individuals, successive interviews with

one individual, as well as the differences which exist between statements by the same set of individuals to Wood (1982).

1. Kumeyaay Language Structure

A major source of apparent contradiction, confusion, misinformation, and miscommunication in interactions with many Native American Groups in the mismatch between the linguistic structures of English and those of many American Indian language (Marvin Loflin pers. com. 1984). In this case, a major structural difference occurs between Kumeyaay and English which has always been the cause of much misunderstanding. The Kumeyaay linguistic structures are much more complex in many ways than are the English structures for making the same set of statements, in other ways they are simply very different. These difference must be understood and interviews carefully managed to avoid miscommunication occurring.

Structural mismatch and difference is the commonest cause of miscommunication between speakers of English and those who have learned English later as a second language. Most have learned vocabulary first and then speak English using their own grammatical structures. Even the next generation who have been raised primarily speaking English, having been raised with this structural variance, and continue its use unless they have had intensive training in English structures. For any and all non-native speakers of English, the necessary intensive structural language training has not existed in the American School system for several generations, therefore the miscommunication frequently continues even when the younger generation no longer speaks the native language.

In the case of Kumeyaay, one of the commonest problem is in the use of pronouns, and referrant words in relation to subjects and objects of sentences. The Kumeyaay language has no pronouns, as such. However, the language has other very effective ways to indicate same or different

subject and same or different object. Thus, every time a pronoun is used, its referent must be specifically sought because subject or object previously mentioned, may have changed. Other structural mismatches also occur which require individual questioning and rewording of questions. For this type of detailed interviewing - the individual interview is essential. Speakers cannot be questioned in the necessary fashion when a group is present.

2. Kumeyaay Cultural Factors

Group interviews present additional problems due to the concepts about individual ownership of knowledge and the reluctance to share such knowledge. The nature of Kumeyaay socio-political-economic-religious structure and of the Kumeyaay management of "knowledge" needs to be thoroughly understood in order to integrate and understand the results of interviews with several members of the tribe.

First, much knowledge was restricted to the elite hierarchy of the tribe, and of each band within the tribe just as it was among the San Luiseno and Cahuilla (Bean 1972, Boscana 1933, White 1957, Shipek 1977, Rudkin 1956).

Secondly, within the elite hierarchy, specific knowledge was individually held and inherited by one successor. The Kwaipai and or Kutchut Kwataay had access to more knowledge than any one specialist because it was his duty to coordinate the economic-religious-political decisions relating to environmental use and religious ceremonial, political or military decisions. Therefore at the present time, the knowledge presented by each Kumeyaay must be examined in the light of his ancestor's position within the tribe or band, and his or her ancestor's particular training, as well as the training of the Kumeyaay being interviewed. That is, individuals hold and own their own specific

"Knowledge", it is not "shared", even within a family, it is divulged only grudgingly upon a "need to know" basis. Training continues only for those descendants who show themselves capable of handling, using, and maintaining that knowledge in secrecy. For the above reasons, I have always received different information from different individuals based upon these factors and always expect to receive different information from each. Due to these cultural factors, it must be understood and integrated as complementary information from persons having different backgrounds, not conflicting information.

Third, not only must an individual interviewee's ancestral position in the hierarchy be understood, but the place of origin of the parents of that individual must be known. Keep in mind that intermarriage was both across band lines - distant and nearby bands - but also across inter-tribal lines. Therefore the training of individuals (even of members of the same reservation) would have a very different geographical basis. Also members of any one reservation may have different backgrounds because the Bureau of Indian Affairs moved families around - or a family might enter as refugees from elsewhere and be accepted by the local group. Therefore all Kumeyaay over 50, 60, or 70 years of age may have very different backgrounds of information.

3. Sacred Information. The most sacred information is often presented obliquely through slight clues and unless these clues are recognized and understood by the interviewer, no further information about that subject will be added. Certain information could not be told directly but must be inferred from a variety of clues and unless one knew enough to make the inference and to continue to ask the correct questions, those answers would not be obtained. Note that during the Kuuchamaa interviews when asked about why that particular mountain was sacred, Mrs. Robertson

stated that she had asked that but was not told, that many questions were never answered. This was what she meant (see Shipek Kuuchamaa article enclosed).

4. Summary of Cultural-Socio-Political Factors

All of the above cultural and socio-political factors must be known and considered in order to judge the importance of the varying statements by different individuals. Thus information from Mrs. Robertson was at a higher level and more detailed due to her ancestral training from her great grandfather who was last official Kutchut Kwataay, and grandfather who was Kwaaypaay and informal Kuchut kwataay and her assumption of this tribal leadership role at the death of her grandfather. Closely following was the information from either Tony or Cris Pinto, her brothers who received the ancestral training but were away in the armed forces when Grandfather died and thus did not work with and personally interview all the Kumeyaay elders from that time through the 1970's. Again, the Pintos' ancestors were the top of the Kumeyaay tribal hierarchy and also lived in the local mountain region under consideration at this time. Some of the other's interviewed would have had knowledge related to other regions because their parents came from other places, or they, themselves, had been raised primarily in other locations and had not moved back and forth as had the leader's family. Therefore statement's of the Pinto's, particularly in relation to sacred information, are of more importance than those of other individuals. Further, limitations may be expected in what they say due to the recent problems with archaeologists and which has eroded trust previously being developed.

5. Contradictions with Wood (1982)

"Their View of Archaeologists and EIR's"

First, they understood that Wood's primary concern was the transmission corridor to the south of Table Mountain, thus those individuals whom he interviewed gave only subsidiary information relating to Table Mt., in accordance with their established practices. Because the transmission line was not a major threat to the mountain, they gave only as much information as they considered necessary to keep the powerline from being moved to that mountain. I was present during some of the interviews with Kumeyaay leaders and I was completely aware of this behavior. Their reasoning was that while Wood seemed trustworthy, they would still reply to his questions on his "need to know" basis. After all, they had earlier trusted the archaeologists and historians of San Diego State University and Serra Museum and informed them about the Kumeyaay use of the Presidio Cemetery until 1900, only to find that the cemetery had been excavated without notifying the traditional religious leaders (contrary to the California archaeologists code of ethics) and that those institutions refused to return the Kumeyaay remains (see enclosed paper Shipek 1983) and now claim that the remains have "disappeared". Further, in recent years many Kumeyaay have had problems with other archaeologists during interviews about various EIR's and CRM's, and all are well aware of archaeologist's propensities for excavation of cemeteries, sacred areas, and disregard of Kumeyaay religious values. Thus, even though the BLM has nominated Kuuchamaa to the National Historic Register, they are still not totally convinced that they should freely inform Wood or BLM about other such localities.

C. Archaeological - Cultural Resource Studies,

Potential Inadequacy of

Having been over the transmission corridor with Clyde Wood of Wirth Associates, and knowing the quality of his archaeologists, I am relatively satisfied with his reports on the corridor. However, without seeing the specific Table Mountain area surveys, but judging from my independent review of numerous EIR's and CRM's conducted by many of the firms operating in San Diego County, I am very dubious of the quality of those done throughout the rest of the Table Mountain region. Fully 90% of the EIR's and CRM's reviewed were extremely poor quality and based upon inadequate theoretical assumptions as well as ground coverage. Certainly the Table Mountain EIA comments and discussion of potential theoretical problems does not present a reassuring picture of competent archaeological surveys, nor of competent theoretical views. For example, Gifford (1937), Treganza (1941), Lyon (1851) and Shipek (1977, 1981, 1982) have all indicated that this specific region was a corn-growing region; some of the reports indicate that corn was grown below every spring and on each alluvial fan. Thus the discussion of this area as only a hunting-gathering area indicates totally inadequate theoretical views based upon lack of ethnographic and ethnohistorical literature search. The Kumeyaay have frequently expressed concern about the derogatory view most of the local archaeologists seem to hold and do not believe most are competent to study their cultures

D. Biological Concern

An additional concern exists in that many of the Kumeyaay herbal practices have long been proved efficacious in healing and curing many heal problems, including the maintenance of diabetics. Our medical and pharmaceutical researchers have never examined nor tested the Kumeyaay

medicines to determine the healing factors. Much important medical knowledge may be lost if these plant communities are destroyed. Again, because human activity has always damaged native plant communities, These isolated, protected have been an unparalleled source of protection for them and one which cannot be matched on privately owned lands subject to many types of modification.

Conclusions

Such activity as would be endangered by the construction of a large wind farm, windmill placement pads, and access roads with both construction crews and maintenance personnel would definitely destroy the sacredness of Table Mountain and the cremation areas, and directly damage the cremation areas and archaeological sites. This secular activity would thus interfere with the constitutional religious rights of the Kumeyaay. It would also damage one of the few remaining plant gathering areas left to the Kumeyaay.

Further, this activity and its increased personnel would also destroy and disrupt invaluable archaeological sites - living areas, collecting areas, sacred use areas, as well as the extensive cremation grounds described by the Kumeyaay. I do not see how such damage can be mitigated with the present lack of competence existing among most of the archaeologists functioning in Southern California. Further, additional people moving regularly through this area, becoming aware of the sites would engender tremendously increased amounts of "pot-hunting" activity. Each of the last two would also be detrimental to the religious rights of the Kumeyaay and to their use of this region to collect both medicinal and food plants.

Therefore for the all above reasons, I find the EIA inadequate and request that a reevaluation of the use of Table Mountain be conducted.

References Cited

- Bean, Lowell John
1972 Mukat's People. Berkeley and Los Angeles: University of California press.
- Boscana, Fr. Geronimo
1933 Chinigchinich in Chinigchinich, a revised and annotated version of Alfred Robinson's translation of Father Geronimo Boscana's Historical Account of the beliefs, usages, customs and extravagancies of the Indians of San Juan Capistrano called the Acagchemen tribe. Edited by P.T. Hanna. Santa Ana: Fine Arts Press.
- Gifford, Edward W.
1931 The Kamia of Imperial Valley. Bureau of American Ethnology Bulletin 97. Smithsonian Institution, Washington, D.C.
- Lyon, Lt. Nathaniel
1851 The Report of a trip to Explore a new Route between San Diego and Fort Yuma. San Diego Herald.
- Rudkin, Charles, trans. and ed.
1956 Observations On California 1772-1790 by Father Luis Sales O.P. Los Angeles, Dawson's Book Shop.
- Shipek, Florence C.
1977 A Strategy for Change: The Luiseno of Southern California Ph.D. Dissertation; U. of Hawaii. University Microfilms.
1981 A Native American Response to Drought as seen in the San Diego Mission Records, 1769-1799. Ethnohistory 28(4):
1982 The Kamia (Eastern Kumeyaay) & Miguel Mission Tap Cultural Resources. In APS/SDG&E Interconnection Program: Native American Cultural Resources. San Diego, Wirth Associates. pp. 21-34 and 74-77.
- Treganza, Adan E.
1947 Possibilities of an Aboriginal Practice of Agriculture among the Southern Diegueno. American Antiquity 12: 169-173.
- White, Raymond C.
1957 The Luiseno Theory of Knowledge. American Anthropologist 59: 1-19.

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Florence C. Shipek, Ph. D., University of
Wisconsin-Parkside

COMMENT #

RESPONSE

8-1

Comment noted

8-2

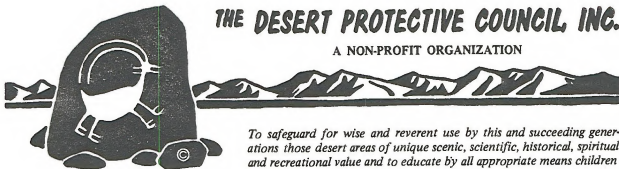
Comment noted

8-3

Text modified and additional data included, ..
see p. 47 of FEA.

THE DESERT PROTECTIVE COUNCIL, INC.

A NON-PROFIT ORGANIZATION



To safeguard for wise and reverent use by this and succeeding generations those desert areas of unique scenic, scientific, historical, spiritual and recreational value and to educate by all appropriate means children and adults to a better understanding of the desert.

BOX 4294 • PALM SPRINGS • CALIFORNIA 92263

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Desert Research Institute

MARLINE WHIPPLE
Author

JAMES WHITEHEAD
Environmentalist

HOWARD WILSHIRE
Geologist

DATE: February 7, 1984

REPLY TO: none required

STATEMENT FOR THE RECORD ON THE DRAFT EA, TABLE MOUNTAIN WIND ENERGY PROJECT

The opportunity to comment on the Draft EA on the Table Mountain Wind Energy Project is deeply appreciated.

As you know, the DPC supports alternate forms of energy generation, including wind farms. In each case, however, the critical issue to be addressed is the impact on desert resources, especially long-term effects on those resources.

The DEA appears to have been prepared for an undefined and undelineated project with unidentified proponents. The lack of specific data for tower sites, roads and connecting transmission lines makes detailed analysis impossible. The DPC finds that this DEA is incomplete and inadequate.

Therefore, DPC comments will be generic in nature and, for the most part, will be in the form of questions which appear to be unanswered in the document.

- Why is there a restricted time limit for comments on such a major commitment of national resources unless it is true that BLM is committed to allowing construction to start in June of 1984?

- Why is BLM attempting to develop, impact and/or compromise WSA CA-060-026 (Table Mountain Wilderness) prior to settlement of litigation? DPC has testified in support of this wilderness area in previous statements.

- Why has BLM presented an incomplete analysis relative to the impact of the wind energy farm on adjacent state wilderness areas?

- 9-5 - Why is BLM now approving the same access route (CA13973) which it earlier rejected for many good reasons? The route passes through at least ten known archeological sites.
- 9-6 - Why does BLM deride the value of Table Mountain as an irreplaceable nation resource, religious and research study area?
- 9-7 - Why did Hillier recently advertise for bidders on Table Mountain without a EIS?
- 9-8 - Why has BLM omitted information on fiscal matters? Is BLM funding the DEA: if not, from whom is BLM collecting? What benefits will accrue to BLM such as royalties, fees, percentages of sales and how will such funds be distributed? What costs will be charged to BLM for administering and enforcing conditions of permit? What liability does BLM have for off-site problems? What benefits accrue to the proponents and taxpayers.
- 9-9 - Who is responsible for rehabilitation if project fails?

In summary, the DPC finds the DEA to be an unacceptable document:

- 9-10 1. The data presented is inadequate, incomplete and internally conflicting.
- 2. The DEA appears prejudiced in support of an ill-defined project, without identifiable applicants.
- 3. The logic as expounded in the mitigation section is incomprehensible and ambiguous.
- 4. The DEA appears to abrogate FLPMA and previously-adopted management plans.

Because of the erosion of visual and physical resources and the apparent violation of legal issues, this BLM-supported project and its DEA must be rejected, unless a full EIS is prepared.

Please include DPC on all mailing lists for this proposal. Address mailings to our Southern Desert Representative.

Respectfully submitted,

Glenn Vargas
Glenn Vargas, Executive Director

Harriet Allen
Harriet Allen, So. Desert Rep
3750 El Canto Dr
Spring Valley, CA 92077

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:
Glenn Vargas, The Desert Protective Council, Inc.

<u>COMMENT #</u>	<u>RESPONSE</u>
9-1	Comment noted
9-2	See Response 5-1
9-3	BLM is not attempting to "develop, impact, or compromise" former WSA CA-060-26 prior to settlement of litigation. As the EA points out, no activities which could impair the suitability of the former WSA for wilderness can occur while the injunction is in effect.
9-4	The EA analyzes visual impacts under the VRM portion of the document. This would be the primary impact to state park lands. Impacts of specific development proposals will be analyzed in site-specific EAs prepared prior to approval of any development activities.
9-5	BLM has neither approved or rejected the access route in question for the purpose of wind energy development. The MFP closure of the road did not specifically deal with wind energy development. Therefore, this document serves to evaluate conflicts and impacts.
9-6	The EA repeatedly points out the significance and research value of Table Mountain.
9-7	Incorporated into document. See page 3.
9-8	BLM is funding preparation of this document. Grantees would fund site-specific EAs. Based on an appraisal BLM would receive a percentage of gross revenues of operating wind

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:
Glenn Vargas, The Desert Protective Council, Inc. (Con't)

COMMENT #

9-8 con't

RESPONSE

farms on public land. Any money earned goes into the general Treasury and is distributed as directed by the National budget. The grant holder would be fully liable for problems occurring as a result of construction, operation, maintenance and termination of a right-of-way. The grant holder would fund BLM monitoring of project.

9-9

The grant holder would be required to rehabilitate if a project terminated.

9-10

Comment noted

MOUNTAIN DEFENSE LEAGUE



P.O. Box 2267, San Diego, CA 92112
(619) 298-3738

February 8, 1984

To: Bureau of Land Management

From: Mountain Defense League

MDL COMMENTS REGARDING TABLE MOUNTAIN WIND ENERGY PROJECT

Table Mountain is reknowned nationally for its irreplaceable resources and its highly scenic and visible qualities.

The Draft EA fails to recognize the on-going discoveries of cultural treasures; nor the unequalled opportunities for study and research.

10-1 The Draft EA is inconsistent, incomplete and inadequate.

MDL rejects the document en toto.

The project should not go forward until there is a full disclosure of applicants, tower sites, roads and connecting lines and until an EIS has been prepared and subjected to public review.

MOUNTAIN DEFENSE LEAGUE

Byron F. Linsley, Jr.
Byron F. Linsley, Jr.

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Byron F. Linseley, Mountain Defense League

COMMENT #

RESPONSE

10-1

Comment noted



San Diego Gas & Electric

February 6, 1984

Ms. Lynda Kastoll
 Bureau of Land Management
 El Centro Resource Area
 333 South Waterman Avenue
 El Centro, California 92243

Dear Ms. Kastoll:

San Diego Gas and Electric appreciates the opportunity to comment on the "Draft Environmental Assessment for the Table Mountain Study Area, Wind Energy Development." SDG&E supports development of alternative and renewable resources within our service territory to diversify our resource mix and reduce our dependence on oil and gas for generating electricity.

We have the following specific comments to make on the Draft EA:

11-1 1. Purpose and Need (pg. 1). The statement that the proposed development of wind energy resources would "furnish access to the economic energy market should be deleted. While that statement would apply to long distance, extra-high-voltage transmission line projects such as our Southwest Powerlink which will enable import of coal fired power, it does not apply to generation facilities. The statement: "and enhance system flexibility by diversifying energy sources" combines two concepts. We suggest it be re-written to read: "enhance system flexibility; and diversify energy sources."

11-2 2. Permitting Procedure (pg. 6). It is indicated that for specific wind generation projects a "plan of development/EA" will be prepared addressing location of turbines, roads and other appurtenances. Those major appurtenances should include transmission lines. SDG&E currently has no transmission lines into this area. The necessary transmission lines to interconnect specific wind generators with the SDG&E system could be lengthy. It is neither economically feasible nor operationally prudent to interconnect with the Southwest Powerlink which is shown passing through the study area.

3. Power Transmission Corridor Impacts (pg. 50). The 50-foot setback between edge of the 500 kV line right-of-way and

Ms. Lynda Kastoll
February 6, 1984
Page Two

11-3
wind farm development was requested in January, 1983, for installation of wind monitoring stations. This distance may not be sufficient for wind turbine-generators. The proper setback should be based on the maximum height of equipment located near the right-of-way to minimize the possibility of downed equipment coming in contact with energized conductors. The actual dimension can be addressed in each project specific "plan of development/EA." Again, we request the opportunity to review each project specific EA.

11-4
4. Power Transmission Corridor Mitigation (pg. 66). The following mitigation measure is suggested: "Equipment shall not be placed closer to the edge of right-of-way of the Southwest Powerlink 500kV transmission line than the equipment's maximum height."

Should you wish to discuss, or have any questions on, our comments do not hesitate to contact Mr. Michael W. Danna of my staff at (619) 232-4252 Ext. 1178.

Sincerely,


E. M. Gabrielson
Manager

EMG/MWD/vwe

cc: F. W. DeVore
H. D. Compton
M. W. Danna
G. W. Pennington

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:
E. M. Gabrielson, San Diego Gas and Electric

COMMENT #

11-1

11-2

11-3

11-4

RESPONSE

Comment noted and incorporated
into document. See page ____.

Comment noted and incorporated
into document. See page ____.

Comment noted and incorporated
into document. See page ____.

Comment noted and incorporated
into document. See page ____.



San Diego Chapter of the Sierra Club

House of Hospitality, 1549 El Prado, Balboa Park
San Diego, California 92101

9 February 1984

Bureau of Land Management
333 South Waterman Ave.
El Centro CA 92243

Dear Mr. Zortman:

We have had little time to prepare a reply to the Draft Environmental Assessment of Table Mountain. It is hoped that this will reach you in time for your consideration.

12-1 If the cultural resources of Table Mountain are of overriding importance, as indicated in the EA, and mitigation is not possible, the wind-farm leasing request should be denied. We are not qualified to assess the value of the archeological sites, deferring to the professionals in this matter. To prevent vandalism, the trail/road to the top of the mountain should be closed.

12-2 Should the development be considered, we would want an evaluation of how it would affect the contiguous and overlapping W.S.A. and its possible designation as a Wilderness Area.

12-3 However, we would like to see the greater use of wind energy in Southern California, even though some environmental degradation would inevitably result. It is hoped that the B.L.M. and other government agencies would assist in pursuing the goal of more energy from renewable and non-polluting sources.

Jeanne Davies

Jeanne Davies
Energy Chair

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Jeanne Davies, San Diego Chapter of the
Sierra Club

COMMENT #

12-1

12-2

12-3

RESPONSE

Comment noted

Comment noted

Comment noted

LETTER #13

*Mrs. Robert Irvine Landis
940 Gage Drive
San Diego, California 92106*

February 8, 1984

Mr. Roger Zortman, Area Manager
Bureau of Land Management
333 So. Waterman Avenue
El Centro, Ca., 92243

Dear Mr. Zortman,

13-1 Before Rosalee Pinto Robertson left San Diego for the Mayo Clinic, where she died, she told me, "We must protect Table Mountain!" She was too ill to have the energy to tell me much about the reasons the mountain is so sacred - what little she did tell me I passed along to Pat Welch, but she, from her great storehouse of knowledge about the past, was anxious that the mountain be preserved as a spiritual legacy for the future.

13-2 The Kumeyaay were not the only ones for whom the mountain was sacred. Young Luiseno - as evidenced by the attendance of Pat Arviso on the BLM site trip to the Table Mountain area - are also interested in preserving the mountain for the spiritual instruction of their youth.

13-3 Non-Indians, such as myself, are equally interested in preserving for American youth of all races reminders of spiritual dependence, reminders that the material - even the development of alternate energy sources - is not the foremost factor in life.

Sincerely,

Virginia Bridge Landis

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Virginia Bridge Landis

COMMENT #

RESPONSE

13-1

Comment noted

13-2

Comment noted

13-3

Comment noted

Feb. 8, 1984

Mr. Roger Zortman
Bureau of Land Management
333 So. Waterman Ave.
El Centro, CA. 92243

Reference # CA-14633
2800(C-067.26)

Dear Mr. Zortman:

I have reviewed the draft Environmental Assessment that assesses the impacts of potential wind energy development in the Table Mountain Area of San Diego County, California.

14-1 My particular concerns focus on the expected impacts to cultural resources. I am the cultural resources project manager for the Southwest Powerlink Project (formerly Interconnection Project) and am the principal investigator for the archaeological studies conducted by Wirth in the Jacumba area. I have conducted various surveys in the portion of the Wind Energy Study Area below Interstate 8 since 1976. I also directed the archaeology survey of SDG&E's right-of-way across San Diego County and have done considerable survey work in the Santa Rosa Mountains, which are similar ecologically to the Jacumba/Table Mountain area.

14-2 In my opinion the description of the cultural resources, the assessment of their significance and the evaluation of potential impacts in the environmental assessment document are very good and well-written. My purpose in writing is to reinforce the statements about the cultural resources already in the assessment and to bring to your attention one particular area that I know deserves absolute protection.

14-3 I am specifically concerned about activities in sections 2 and 3 below Interstate 8. The cultural resources are extremely significant. The base camps in the area are unique. Of all the cultural properties along the about 400 mile Southwest Powerlink study area in California and Arizona, this area has the most significant sites. In fact, I believe one site is among the ten most important sites in Imperial and San Diego counties. For sites with a desert or semi-desert setting, it is surely among the top few sites that are known. It would be impossible to adequately mitigate impacts to portions of the site with subsurface deposits. The present technology of excavation is not sufficient to really mitigate any major impacts and the costs for data recovery would be exorbitant. (It should be noted that Wirth did not mitigate impacts to any subsurface deposits in the Jacumba area.

14-4 The Southwest Powerlink Project only touched on small portions of the significant properties I am describing. Construction occurred only in the least dense areas of the sites and along their edges. The core or any of the subsurface deposits of the sites were not disturbed at all by construction. All of Wirth's testing was for the purposes of describing the site and its contents; we tested much less than 1% of the site.)

14-5 On the basis of my knowledge of the cultural resources, I feel Alternative #1 is not an acceptable alternative.

14-6 Alternative #2 is viable only if the BLM is willing to spend considerable man years and money identifying sites that require absolute protection (and actually protecting them), developing sound research designs that address the full research and public values of the cultural resources of the region and conducting data recovery at those cultural properties that will be impacted. It will be a considerable undertaking since the desert transition environmental zone, in which Table Mountain and Jacumba Valley is situated, has more prehistoric sites than any other environmental zone under the administration of the BLM's California Desert District.

14-7 Alternative #3, of course, is the most acceptable from a cultural resources point of view given the known cultural resource values of the Table Mountain/Jacumba Valley area.

Jan Townsend

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Jan Townsend

<u>COMMENT #</u>	<u>RESPONSE</u>
14-1	Comment noted
14-2	Comment noted
14-3	Comment noted
14-4	Comment noted
14-5	Comment noted
14-6	Comment noted
14-7	Comment noted

3750 El Canto Drive
Spring Valley, CA 92077
February 7, 1984

Roger D. Zortman, Area Manager
Bureau of Land Management
333 South Waterman Avenue
El Centro, CA 92243

Re: Draft EA, Table Mountain Wind Energy Project

It was with disappointment that I read the Draft EA. The lack of specificity relative to tower sites and ancillary facilities makes the document almost worthless - who can comment on a "pig-in-a-poke?"

In spite of much material, the EA says little except: "stand back and let 'em whirl!"

15-1 BLM's support of the project is obvious and appears to prejudice the conclusions. The document makes a mockery of cultural resources, wildlife, research and wilderness. In addition to reading the EA, I am aware of lobbying and "pressure games" which have exceeded ordinary permit processing.

15-2 Furthermore, BLM ignores FLPMA, its own adopted management plans and other jurisdictions such as Anza-Borrego Desert State Park, Fish & Game, American Indians, etc.

First, I will comment on a few unknowns.

15-3 Location of Towers.
Specific tower sites are not indicated. It is impossible to analyze their impacts when approximately ten square miles north of I-8 are under consideration.

15-4 I question the location of towers on the top of Table Mountain. By observation and not technical knowledge, I note that Los Banos, Altamont and other energy farms are located on relatively smooth hillsides where constant, not turbulent, winds flow.

15-5 Location of lines connecting to SDGE.
Who can comment on a figment of imagination? Has SDGE set location for intertie? Has CalTrans given permit for crossing I-8 (underground, overhead?) Who is liable for fires and accidents along connecting line? We observed many huge towers toppled to the ground parallel to I-5 south of Highway 46 in October-November, 1983. Why did BLM/SDGE abandon line down Table Mountain after research study was made?

Cost to Taxpayers.

- 15-6 How will BLM be recompensed? By the number of towers, by % of energy sold to SDGE, by fees? Will funds go to BLM or general fund?
- What will it cost the taxpayers to administer the project (monitoring, reporting, enforcing) for construction, maintenance, safety, wildlife and cultural resources? Will SDGE ratepayers pay less? Will UCAN enforce and monitor sales to SDGE? Will project investors and SDGE shareholders be the sole beneficiaries?

Secondly, I will comment on the Draft EA.

Wildlife.

- 15-7 The document skips over long-term impacts of the project, especially on raptors and Bighorn. It downplays the noise, the flashing reflections from the blades. One has only to drive I-5 and H 508 to witness the brilliant flashes and the persistent whooshing of the propellers.
- Though towers may be located outside of the yet-to-be-determined lambing area, the almost constant noise and flashes could effect breeding, feeding and resting cycles of the *Ovis canadensis cremnobates*. Flashes and noise and ground vibration could effect the vision and hearing of raptors as well as their prey.

Wilderness.

- 15-8 BLM apparently has such an assurance from the court system that Watt's 12-30-82 decision will be upheld that it has no intention of applying interim management policies to WSA CA 060-026. By permitting (encouraging?) development now, BLM is insured against having to administer any wilderness area on Table Mountain.
- Impacts on STATE WILDERNESS areas in adjacent Anza-Borrego Desert State Park are scorned. BLM does admit illegal entry by OHVs might be a problem, but by opening new roads on Table Mountain, BLM will condone degradation of ABDSP Wilderness.
- Nothing is mentioned about the problems associated with fire entering ABDSP from the project area.

Archeology.

- 15-9 BLM appears to defy state and federal policies, laws and regulations relative to cultural resources and Native American issues. Can BLM prove that constant ground vibration will not effect buried artifacts or that erosion started by construction and maintenance activities will not destroy or degrade national treasures? BLM appears to be "by-passing" many registered sites by invoking various escape clauses as well as foreclosing opportunities for future registration of sites.

- 15-10 SUMMARY: The EA is inadequate, incomplete and internally conflicting. It lacks specifics of locations, liability and responsibility for fires and accidents, rehabilitation in case of failure, costs and benefits and degradation of national resources. It is prejudiced against existing laws and adopted management plans.

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Harriet Allen

<u>COMMENT #</u>	<u>RESPONSE</u>
15-1	Comment noted
15-2	Comment noted
15-3	Comment noted
15-4	Comment noted
15-5	Specific locations of distribution lines and intertie would be addressed in site specific EA.
15-6	See Response 9-8
15-7	Comment noted
15-8	Comment noted
15-9	Comment noted
15-10	Comment noted



COUNTY OF SAN DIEGO

Department of Planning & Land Use

Please reply to:

[] 5201 Ruffin Road
San Diego, CA 92123

[] 334 Via Vera Cruz
San Marcos, CA 92069
(619) 741-4236

[] _____, Director
Suite B
(619) 565-3000

[] Codes Enforcement
Suite B
(619) 565-5936

[] Planning
Suite B5
(619) 565-3066

[] Regulatory Planning
Suite B4
(619) 565-5971

February 8, 1984

Roger D. Zortman
Bureau of Land Management
El Centro Resources Area
333 South Waterman Ave.
El Centro, CA 92243

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR WIND ENERGY DEVELOPMENT,
TABLE MOUNTAIN AREA.

Dear Sir:

The following comments refer to the Draft Environmental Assessment (E.A.) for the Table Mountain Study Area Wind Energy Development (CA-14633 2800 [C-067.26]). The County of San Diego has shown great interest in the management of land under the Bureau of Land Management jurisdiction. In 1980, the San Diego County Board of Supervisors reviewed the management plan for the Eastern San Diego County Planning Unit and on November 5, 1980, voted to recommend to the BLM that all wilderness study areas in that plan, including the Table Mountain WSA (CA 060 26) be designated wilderness. The reasons for this recommendation was that the Jacumba Mountain State Wilderness lies adjacent to Table Mountain to the north, and the two would form a single unit. At that time, the Board of Supervisors also looked favorably on the other features of the Eastern San Diego County Planning Unit plan.

Examination of the EA for the Wind Energy Development Proposal on Table Mountain raises a number of issues that need clarification. It is recognized that there is an important public need to encourage and develop alternative energy sources. There are however, three major land use issues associated with this project that need to be better analyzed and which do not appear resolved in the Environmental Assessment.

The first involves the overall philosophy of treating public lands for multiple use for the good of the people. Public lands in San Diego County are of increasing value as a resource since private land is being developed at a rapid rate. The people of San Diego County look to the public lands as the areas for providing recreation and they represent the best mitigation for impacts of environmental resources and natural landscapes. Table Mountain has well documented values as a natural resource area. The development of wind towers in an area with existing natural values would represent an extreme change in the atmosphere and setting of the site and a land use impact to those resources. It would be unfair to the people of the United States to develop a proposal that would benefit individual entrepreneurs over the public when public lands are concerned.

16-1

16-2 The second issue involves the wilderness study area, this recommendation was not in concordance with the recommendations of the San Diego County Board of Supervisors and is now under court jurisdiction. Processing a proposal for wind energy development at this time could be considered premature and an incompatible use to a desire by the County for wilderness designation.

16-3 The third land use issue concerns the status of the Eastern San Diego County Planning Unit Management Framework Plan that was adopted April 9, 1981. That plan indicated that a major portion of Table Mountain would be designated an Area of Critical Environmental Concern (ACEC) due to the well documented extensive cultural resources there. The ACEC designation would result in a management plan designed to protect those resources. Part of the ACEC plan would involve restricting vehicular access on Table Mountain and acquiring adjacent parcels. Processing proposals for wind energy development in this area appears to be a direct conflict with the Management Framework Plan and ACEC concept because, as the EA indicates, there would be unmitigable impacts to Cultural resources on the site if the proposal is approved. The Environmental Assessment needs to expand the discussion of this conflict, the importance and meaning of the ACEC designation and reasoning for processing a proposal that contradicts an adopted plan.

16-4 Additionally, in reviewing the Environmental Assessment, we have several concerns for impacts and proposed mitigation measures as discussed in the document. The scenic values of Table Mountain seem underrated in the document. Table Mountain serves as a visual backdrop for a fairly wide area. It is a notable feature as one proceeds west on I-8 where it provides a contrast in texture and color from the large, pale boulder-strewn terrain. The document does not indicate the potential number of wind generators, but given the size of the area and the supposed importance of its wind generating conditions, it would be expected to be hundreds. With this in mind, it seems improbable that several of the mitigation measures for visual impacts (avoiding skylining, painting structures to camouflage them, concealing roads) will be feasibly implemented or would actually serve to mitigate visual impacts.

16-5 In similar manner, the mitigation measures for biological impacts (prohibit ORV activity, limit road construction and land clearing, limit transmission lines in mouths of canyons and ridge tops) don't seem feasible especially when one examines the Boulevard/Hipass area where wind machines have been built and the vegetation has been completely cleared. In addition, the level of biological survey of the site appears incomplete and we would hope that the future developments would require more detailed analysis of actual location of sensitive biological resources. In any case, the development of a large number of wind machines in this area is likely to create severe biological impacts to this sensitive resource area.

16-6

Lastly, the EA seems accurate in the assessment that project construction is largely unmitigable for archaeological resources and Native American values. The fact that the area has been used for a number of years as an outdoor classroom for archaeology, the area is still apparently of great importance to the Native Americans in the area, and the extensive cultural resources of the level of a National Historic Place particularly raises the significance of this area as an undisturbed natural resource. We hope that the BLM carefully considers these impacts to public values before allowing the development of wind generating proposals on Table Mountain and makes their reasoning process available to the public through the development of an EIS.

Sincerely,



Walter C. Ladwig, Director
Department of Planning and Land Use

WCL:TO:MUE:tw

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Walter Ladwig, County of San Diego, Dept. of
Planning and Land Use

COMMENT #

RESPONSE

- | | |
|------|--|
| 16-1 | The presence of natural resources does not preclude other uses of the area. The purpose of this document is to determine the extent of conflict. |
| 16-2 | Comment noted |
| 16-3 | Project conflicts are clearly stated in the impacts section of the EA. Additional descriptive data dealing with ACEC designation is included in the Record of Decision. The MFP does not specifically deal with wind energy development. Consequently, the present document serves this purpose and evaluates project impacts. |
| 16-4 | The scenic quality of Table Mountain was rated by BLM landscape architects utilizing the formal inventory procedures of BLM's visual resource management (VRM) system. Views from key observation points and user attitudes toward change were considered in the final VRM class recommendations. The EA recommends several mitigations including restrictions on development in visually sensitive areas. If the mitigations are implemented, visual contrasts created by development will remain within acceptable VRM class limits. |
| 16-5 | Mitigation and feasibility of development will be determined by site specific surveys and environmental assessments. |
| 16-6 | Comment noted |

KEN BOSLEY<WIND FARM DEVELOPER
14611 YORK RD
SPARKS MD 21152 10AM

Western
Union Mailgram



4-001583S041 02/10/84 ICS IPMRCZ CSP L5aB
7147209424 MGM TDRN NEWPORT BEACH CA 938 02-10 0331A EST

LETTER #17

LYNDA KASTOLL, REALTY TEAMLEADER
BUREAU OF LAND MANAGEMENT
EL CENTRO RESOURCE AREA
333 SOUTH WATERMAN AVE
EL CENTRO CA 92243

PLEASE INCLUDE THIS MAILGRAM IN THE FINAL ENVIRONMENTAL STATEMENT AND ALL OTHER PROCEDURES.

THIS IS IN RESPONSE TO THE ENVIRONMENTAL ASSESSMENT FOR WIND ENERGY DEVELOPMENT ON TABLE MOUNTAIN. MY COMMENTS ARE BRIEF AS MY APPLICATION TO INSTALL WIND TURBINES ON TABLE MOUNTAIN HAS BEEN HELD FOR REJECTION BY THE DISTRICT MANAGER CONCERNING ENVIRONMENTAL STUDY PROCEDURES AND PREMATURE UTILITY INVOLVEMENT REQUIREMENTS, A QUICK RUN-DOWN OF DISCREPANCIES THAT I HAVE NOTICED JUST SKIMMING THE ENVIRONMENTAL ASSESSMENT INCLUDE THE FOLLOWING:

17-1 1. WHY IS THE BUREAU HAVING A NOTICE OF CALLING WHEN THE BUREAU MAINTAINS THAT CALIFORNIA WIND ENERGY SYSTEMS INC HAS AN EXCLUSIVE FRANCHISE FOR ALL ELECTRICAL CAPACITY IN THE AREA. IF THIS IS NOT TRUE IN THE BUREAU'S OPINION NOW PLEASE SEND ME A LETTER TO CORRECT YOUR NOTES THAT ARE IN MY CASE FILE CA13973.

17-2 2. THE ECONOMIC AND SOCIAL ADVANTAGES FOR THE AREA IF WIND ENERGY IS DEVELOPED WOULD BE TREMENDOUS. THE LOCAL POPULATION FRANKLY DOESN'T GIVE A DAMN ABOUT ENVIRONMENTAL CONCERNS WHEN THERE ARE NO JOBS HARDLY AT ALL. THE 500 KV POWER LINE PROJECT IS NEAR COMPLETION THUS THERE IS A HIGHLY TRAINED LABOR FORCE TO INSTALL WIND TURBINES. IF WIND TURBINES ARE NOT INSTALLED IN THE NEXT SEVERAL SEASONS A TREMENDOUS PERCENTAGE OF THE LOCAL INHABITANTS WILL BE MOVING AWAY OUT OF THE AREA. NO PUBLIC MEETINGS HAVE BEEN SCHEDULED FOR THE LOCAL POPULATION TO HAVE INPUT INTO THESE TOPICS.

17-3 3. IN 1981 AND CONTINUING TODAY SAN DIEGO COUNTY HAS NO PERMITTING REQUIREMENTS OF WIND FARMS IN UNINCORPORATED AREAS UP TO 150 FOOT TALL WIND TURBINES. IN THE SAN GORGONIO PASS THE BUREAU HAS TAKEN THE LEAD IN PROMOTING WIND FARM DEVELOPMENT WHEREAS RIVERSIDE COUNTY HAS GENERALLY RESTRAINED WIND FARM DEVELOPMENT. WHEREAS IN SAN DIEGO COUNTY, THE COUNTY IS PROMOTING WIND POWER STRONGER THAN WHAT THE BUREAU'S ATTITUDE IS.

17-4 4. AS AN APPLICANT I WAS NOT EVEN INFORMED AND PURPOSELY KEPT IN THE DARK CONCERNING THE ENVIRONMENTAL ASSESSMENT BEING PREPARED. I WAS NOT EVEN ON THE LIST IN THE ENVIRONMENTAL ASSESSMENT AS BEING A DEVELOPER.

5. IN A TELEPHONE CONVERSATION WITH YOU ON MAY 4 1983 YOU SAID THAT THE ENVIRONMENTAL ASSESSMENT WAS BEING PREPARED AT THAT TIME. THOUGH ON A JULY 5 LETTER FROM THE AREA MANAGER THE BUREAU REQUESTED THAT I FUND AN ENVIRONMENTAL ASSESSMENT. AS YOU RECALL IN MY ATTEMPT TO



17-5 UNDERSTAND THE PROCEDURES I WAS DISMAYED THAT YOU WOULD NOT DISCLOSE TO ME THE NAME OF CALIFORNIA WIND ENERGY SYSTEMS INC ENVIRONMENTAL CONTRACTOR. SEVERAL MONTHS LATER THE STATE OFFICE GAVE ME THE NAME BUT THE PROCESS HAD COME TO A STANDSTILL.

6. THE ROAD GOING TO THE TABLE MOUNTAIN PLATEAU IS DESIGNATED IN THE IMPERIAL VALLEY SOUTH MOTORIZED VEHICLE INTERIM ACCESS GUIDE AS A SEASONAL USE ROUTE. THESE GUIDES ARE DISTRIBUTED CURRENTLY IN MOST CALIFORNIA BLM OFFICES. THE ENVIRONMENTAL ASSESSMENT STATES THAT THIS ROAD IS CLOSED. THERE ARE NO SIGNS ON THE LAND AND I AM UNAWARE OF ANY OTHER NOTIFICATIONS THAT THIS ROAD IS CLOSED. SIMILARLY THE SOUTHEAST 1/4 OF SECTION 35 HAS BEEN IDENTIFIED IN THE E.A. AS HAVING ALL KINDS OF ENVIRONMENTAL AND OTHER CONCERNS. THE LOGICAL REASON IS

17-6 THAT THIS AREA IS AS FAR BACK ON THE UNIMPROVED ROAD SYSTEM THAT CARS CAN EASILY TRAVEL ON. SO EVERYONE GETS OUT OF THEIR CARS AND SCOUTS AROUND FOR THINGS THAT ARE IMPORTANT AS PUBLIC RESOURCES. THOUGH NO MENTION IN THE ENVIRONMENTAL ASSESSMENT HAS BEEN SPECIFICALLY MADE TO THE EXTREME LOCAL GROUND DISTURBANCE THAT HAS BEEN DONE OVER MANY YEARS FROM THE MICA GEM MINE, THUS THIS AREA HAS BEEN OVERRATED IN ITS ENVIRONMENTAL IMPORTANCE. THE MAIN REASON WHY MY APPLICATION WAS APPLIED FOR IN THE MICA GEM MINE AND THE PLATEAU ROAD AREA WAS THAT THIS AREA HAD ALREADY BEEN GREATLY DISTURBED.

17-7 7. THE 1980 BLM GRAZING STUDY RECOMMENDS THAT TABLE MOUNTAIN PLATEAU SHOULD BE USED FOR CATTLE GRAZING AFTER BEING BURNED. GROWING UP ON A DAIRY FARM I KNOW THAT CATTLE WILL CAUSE MORE SURFACE DISTURBANCE THAN WIND TURBINE INSTALLATIONS.

17-8 THE BUREAU HAS NOT BEEN PRUDENT IN THIS ENVIRONMENTAL ASSESSMENT SINCE THEY HAD DECIDED NOT TO DISCUSS WHEN DEVELOPMENT AND ITS ENVIRONMENTAL CONCERNS WITH ME OVER THE LAST YEAR. AS THE ONLY LEGAL DEVELOPER WITH RIGHTS TO BE EVALUATED NORTH OF THE FREEWAY IT IS A SHAME THAT THE BUREAU MANAGEMENT HAS ON A NUMBER OF OCCASIONS ORDERED ITS STAFF SPECIALISTS NOT TO DISCUSS ANYTHING WITH ME. I HAVE LIVED IN THE AREA OVER THE PAST SEVERAL YEARS AND HAVE DONE WHAT RESEARCH I HAVE BEEN ABLE TO GATHER FROM LOCAL SOURCES CONCERNING ENVIRONMENTAL RESOURCES. ITS THE PUBLIC'S LOSS.

17-9 I APPLAUD THE STATEMENT ON PAGE 71 THAT SAYS "IT IS A REAL POSSIBILITY THAT WIND ENERGY DEVELOPMENT LEASES (RIGHT OF WAY) WILL BE ISSUED NORTH OF INTERSTATE 8."

AGAIN I AM SORRY THAT I DO NOT HAVE THE TIME WITH MY INTERIOR BOARD OF LAND APPEALS STATEMENT DUE IN SEVERAL DAYS TO RESPOND MORE COMPLETELY. AS A LAST CURIOSITY WHY WASN'T PETER ERTMAN'S NAME ON THE ENVIRONMENTAL ASSESSMENT AS HE SEEMED TO BE EDITING MOST OF THE TEXT AND SUPERVISING ITS PREPARATION?

17-10 AGAIN AS I KNEW BACK IN 1981 SOME DAY TABLE MOUNTAIN WILL BE JAMPACKED WITH WIND TURBINES ON THE ENTIRE PLATEAU. NEITHER THE BUREAU OR OTHER GOVERNMENT AGENCIES WILL PRECLUDE THIS DEVELOPMENT AS ITS POTENTIAL FOR REDUCING AIR POLLUTION AND GROWING INTERNATIONAL CONCERNS CONTINUE TO WEIGH HEAVILY AGAINST ELUSIVE ENVIRONMENTAL

Western
Union **Mailgram**



RESOURCES OF THE AREA. IN FACT THE WIND IS THE MOST IMPORTANT
RESOURCE.

KEN BOSLEY
WIND FARM DEVELOPER
PO BOX 17542
IRVINE CA 92713

03:34 EST

MGMCUMP

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

<u>COMMENT #</u>	<u>RESPONSE</u>
17-1	BLM does not maintain California Wind Energy Systems, Inc.(CWES) has an exclusive franchise for all electrical capacity. However, they are the only ones who have supplied proof of intertie agreement with SDG&E.
17-2	Comment noted
17-3	Comment noted
17-4	Comment noted
17-5	Comment noted
17-6	Comment noted
17-7	Comment noted
17-8	Comment noted
17-9	Comment noted
17-10	Comment noted

Advisory
Council On
Historic
Preservation

LETTER #18

1522 K Street, NW
Washington, DC 20005

Reply to:

730 Simms Street, Room 450
Golden, Colorado 80401

February 10, 1984

Mr. Roger D. Zortman
Area Manager
Bureau of Land Management
El Centro Resource Area
333 South Waterman Avenue
El Centro, CA 92243

REF: Potential wind energy development, Table Mountain area.

Dear Mr. Zortman:

We have received and reviewed the draft Environmental Assessment (dEA) for the above-referenced project. We note, from findings in the "Cultural Resource" sections of this document, that the proposed undertaking is projected to have significant adverse consequences for cultural properties listed or eligible for listing in the National Register of Historic Places (National Register) and for the traditional values of Native Americans. The dEA states:

- p.44 - "Two archaeological districts, included on or eligible for the National Register of Historic Places, are present within the study area."
- p.58 - "Wind farm development will constitute an adverse impact to Table Mountain."
- p.60 - "Total leasing of the Table Mountain study area is impractical. Complete destruction of cultural resource values would constitute a significant loss to the American people. Total mitigation would be impossible because of lost data and prohibitive economics. Furthermore, issuance of any lease carries an implicit right for development. Complete development of the study area is simply not possible."
- p.70 - "Project avoidance is the most effective mitigation device."
"Project construction is largely unmitigatable, on the upper reaches of Table Mountain. No manner of mitigation exists which would offset impacts to the Native American community."
- p.71 - Future generations will pay the price for development today. The uniqueness and complexity of Table Mountain

cultural resources dictate that the area should be maintained as it currently exists.

18-1 In spite of these findings, the action proposed in the dEA is Alternative #1, which "would provide for issuance of rights-of-way grants for wind energy development on all available public land within the study area" (p.8). No reason is given for the selection of this alternative over the others considered. Regardless of the substantive merits of the project, which may be considerable indeed, the apparent disparity between the dEA's findings concerning impacts on significant cultural values and the dEA's conclusion to propose the full-development option warrants explicit explanation and justification.

Several other subjects addressed in the dEA should receive further consideration, as well:

18-2 Research Questions - p.39 - "The importance of Table Mountain archaeology lies in the range, complexity, and diversity of research questions which are available for study," and which "are virtually limited only by one's imagination." Several topics are then cited (p.40) which could be elucidated through study of archeological resources in the Table Mountain area. In selecting a course of action relative to wind energy development in this area and in discussing potential means for mitigating the effects of this course of action, specific research questions which would be most amenable to disciplined investigation in the area should be articulated. These questions should be ordered in a priority ranking which is justified by a comprehensive rationale and an integrated research program.

18-3 Predictive Modelling - p.35 - "The ASM study is noteworthy since it provides archaeological site density and population estimates with calculated confidence limits." This is a valuable beginning in the effort to outline a disciplined approach to archaeological research in the Table Mountain study area. We suggest that this initial step in predictive modelling should be joined with the description and ranking of important research questions to determine which subjects may be most fruitfully investigated in which locations.

18-4 Preservation Planning - p.58 - "Full potential of the Table Mountain data base can be approached only through a phased program. Such a program would consist of an explicit research orientation in a regional perspective. The full range of site types would be tested and evaluated to examine site specific prehistoric activities as well as site interrelationships. Certain archaeological properties would also be slated for preservation." If mitigation measures become necessary to protect prehistoric sites or to retrieve archaeological knowledge from areas threatened with disturbance, we recommend that this sort of disciplined regional preservation

planning should be fully developed and implemented to guide the mitigation of this disturbance.

18-5 Native American Values - p.46 - "The Table Mountain area is important to today's Kumeyaay because it served as a traditional gathering area. As previously mentioned, the region abounds with important plant foods." "The general area figures in trade and exchange systems between the desert and mountains." It is unclear from these statements whether the Table Mountain biogeography is important to the Kumeyaay on the basis of remembered cultural affinities with a former way of life or on the basis of the current economic importance of current, continuing resource uses. In discussing values which link the living Kumeyaay culture with the Table Mountain area, and in considering means for minimizing the potential effects of wind energy development on these values, it is most important to determine the degree to which such values act in preserving a general sense of cultural heritage and geographic identity and the degree to which they act in the existing social and economic life of the culture.

18-6 Historic Resources - p.45 - "Historic resources within the Table Mountain public lands are not considered sensitive. The location of historic properties will not preclude wind development. Project impacts can be mitigated, if necessary. The historic element of Table Mountain cultural resources will receive no further comment." Potential effects on historic resources occurring on Table Mountain are not adequately addressed in this manner. If wind energy facilities are developed, a survey of historic resources must be undertaken and the eligibility of these resources for listing on the National Register must be determined in consultation with the California State Historic Preservation Officer (SHPO). If historic resources are found to be eligible for listing in the National Register, then the potential effect of proposed wind energy development on eligible properties must be assessed. If this potential effect would be adverse, then standards of performance must be stipulated which would avoid or mitigate the adverse effect in consultation with the SHPO and the Advisory Council on Historic Preservation (Council).

18-7 We can appreciate that the prospects for wind energy development in the Table Mountain area constitute an important opportunity both for diversifying the energy generation network in the region and for moving ahead with a promising new technology. We are also conscious of the troublesome implications this development may entail in efforts to preserve the cultural resources and values residing in the lands to be affected. Therefore, we offer the above remarks in the hope that they will be helpful in resolving conflicting public interests in development and preservation in this case.

In addition, you may wish to review sections of the Council's regulations (36 CFR 800.6 and 36 CFR 800.8) which provide for the

18-8

development of Memoranda and Programmatic Memoranda of Agreement. Such Agreements establish preservation standards for Federal undertakings which affect National Register or eligible properties and fulfill agency responsibilities for receiving Council comment pursuant to the National Historic Preservation Act of 1966, as amended. This approach is an effective and expeditious means for assuring that appropriate treatments are applied to affected historic properties in ways which will not unduly encumber the progress of the actions which affect them. If you have any questions concerning the above remarks or concerning the development of such an Agreement, or if we can provide anything further at this time, please contact Dean Shinn of my staff at (303) 234-4946, an FTS number.

Sincerely,



Robert Fink
Acting Chief, Western Division
of Project Review

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Robert Fink Advisory Council on Historic
Preservation

COMMENT #

RESPONSE

18-1

To avoid confusion, text
revised in FEA.

18-2

Specific research designs
will follow site specific
environmental assessments
in order to obtain a decision
of "no adverse effect".

18-3

Comment noted

18-4

Comment noted

18-5

See Shipek's comments,
Letter #8.

18-6

Comment noted

18-7

Comment noted

18-8

Comment noted



Association for Transpersonal Anthropology International

Dennis H. Dutton
President, ATAI
5078 Madison Ave.
San Diego, CA 92115
(619) 286-8439

February 10, 1984

Roger D. Zortman
Area Manager
Bureau of Land Management
El Centro Resource Area
333 South Waterman Avenue
El Centro, CA 92243

Dear Mr. Zortman:

I'm writing in response to the draft Environmental Assessment your office prepared on the wind energy development proposal in the Table Mountain Area, San Diego County. First, I want to express my agreement with your recommendation of project denial north of Interstate 8 (page 70), although I wish you would have explained why you feel, "(i)n spite of cultural resource conflicts, it is a real possibility that wind energy development leases will be issued" for that area anyway (71). Second, I'd like to say that I wish you had made your position on the area south of Interstate 8 more clear (71). If I understand correctly, I take it that you do not recommend denial for construction south of 8, but rather make some recommended prohibitions only. I don't think that goes far enough toward respecting the value of the Table Mountain area. Finally, I want to protest the February 10 deadline for comments on the draft. The copy I have before me is dated January 25, leaving less than two weeks for reading a richly documented 100 pages filled with what for many may be difficult-to-comprehend jargon, maps, and charts. Many will have wanted to consult with several others to better understand the subject and write their responses. In some cases this is probably difficult and time-consuming. I personally didn't hear of the deadline (or get to read the draft) until two hours ago.

I'm very pleased with your main recommendation, however. The sections related to Native American values in particular pleased me, although I see one important aspect of Native American values not as strongly said as it might have been: namely, that the mountain is held sacred today by Kumeyaay not only because of past religious activity there, but also because it has a present meaning; that is, Table Mountain today is the subject of

19-2 religious focus among the Kumeyaay. Table Mountain today is considered a sacred place...in fact, a sacred person, more likely, since typically, spirits are held to reside within the most powerful places or objects. Saying this outright makes it clearer that any wind energy development on or near Table Mountain will threaten its sanctity and violate the Native American Religious Freedom Act.

19-3 The Kumeyaay, according to some reports, are experiencing a revival of religious customs. I know from my own ceremonial participation with Kumeyaay and other Southern California tribal members that vigorous attention is being given the old ways, and that people of all ages are looking to their sacred mountains, including Table, as repositories of knowledge and power, and as spirit-houses which merit the utmost honor. To desecrate Table Mountain, then, would constitute a flagrant insult to the Indians of the area and an infringement of their religious freedom.

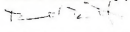
19-4 A last point I want to make is this--that Table Mountain has religious significance to non-Indians as well as native peoples. Some of these, such as myself, happen to practice Native American ways. Others may not, yet still they may recognize and honor Table Mountain within a religious tradition. Mountains are of sacred importance to many if not most of the religions of the world. I know several people who fall within this category.

19-5 It can be physically, mentally, emotionally, and spiritually painful whenever a holy place is threatened or disturbed. But it's enriching when these places are protected and nourished. Thank you for a careful, if not exhaustive draft, and for a recommendation that shows sensitivity and careful consideration of Table Mountain's many values.

19-6 I hope you will recognize this as part of the official response record. I hope, in fact, that you will extend the deadline so that others will be able to participate in the decision-making process. I for one would appreciate the time to make several other comments, particularly surrounding the necessity for us to preserve native habitats. As an herbalist (and member of Friends of the Earth), I am very concerned about developments, however well-meaning, which diminish the quantity and quality of natural flora and fauna.

Thank you for your consideration, and please keep me informed about future matters regarding Table Mountain and similar sensitive areas within your jurisdiction.

Yours Sincerely,


DENNIS H. DUTTON
President, ATAI

Copies:

Personal file
Frank Waters
Elders' Society

February 11, 1984

I was just told that the deadline was extended a few days, so I'll make a few more comments.

In your draft report, you write:

Impacts to vegetation could be great under this alternative [i.e. any development]. Even though the overall vegetational aspect would probably remain unchanged, entire populations of some of the more sensitive species could conceivably be extirpated. (53)

19-7

A loss of a single species of plant is a loss to all of us. I'm not being sentimental here, or even addressing an aesthetic issue (though the value of that in regard to Table Mountain should be obvious): I'm talking ecological facts. Loss of one biotic community member can bring on the death of an entire plant community. It can also remove medicinal species from the pharmacopoeia of the local region or even planet. In a time when epidemic heart disease, cancer, and venereal illness threaten so many of us, we can really spare no avenues of medical research and development; nor should the Kumeyaay be denied access to indigenous treatments that employ herbal remedies.

19-8

Astragalus douglassi is listed in your report as highly sensitive according to the BLM Sensitivity Level index and rare and endangered according to the California Native Plant Society. A variant species of Astragalus is used by the Cheyenne^{for poison oak} and it's therefore likely that the Kumeyaay use its local relative for poison oak. But more importantly, the root of Astragalus may yet be found useful in treating several serious ailments, including forms of cancer. Another variant but related species of the douglassi is used in the Orient for wasting and exhausting diseases because it is a strong tonic and serves to strengthen body resistance. We can't ignore the potential values of such a plant.

19-9

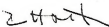
Even a relatively common local desert plant like Ephedra warrants our concern here. Although the Chinese species of ephedra contain a more concentrated amount of ephedrine, a chemical used by the U.S. medical establishment in treatments of lung disorders, the species found on Table Mountain may be unique. Within herbal tradition or science, and American Indian culture in general, the habitat of the individual plant is an important partial determinant of its efficacy. I won't gather an herb that grows beside an even moderately travelled road, for example, because of the possibility of lead contamination. But there is a spiritual side to this too: I sometimes prefer to select a plant that grows in an environment imbued with the presence of special healing powers. Table Mountain is such a place (though I have never wildcrafted there). Ephedra is used by the Kumeyaay for influenza, smallpox, colds and coughs, kidney disease, for purifying the blood and relieving venereal diseases. Since Table Mountain is known to be a place associated with shamanic healing, in which use of herbs

19-9 is common, it is probable that the plant community there is especially favored in the treatment of medical and spiritual crises. It would therefore diminish the mountain's powers to eradicate even a single species, or a single plant, for that matter, if development were allowed there. It would also be another constraint upon the religious freedom of the Kumeyaay and others who hold Table Mountain sacred to them.

19-10 I hope that instead of allowing the wind energy project to go through, you will find a way to protect Table Mountain even further by preventing all vandalism, mining activity, grazing, and ORV activity there. These also are incompatible with the cultural, scenic, and other values of the area, not to mention the spiritual quality.

Thank you for a chance to respond more fully. Could you please send me a copy of the draft EA so that I can more effectively take part in later stages of the decision-making process? I have to return this copy, and would like to study it more.

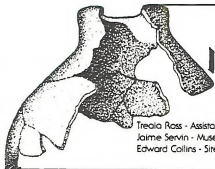
Yours,



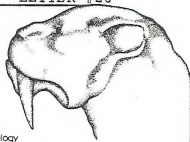
BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Dennis Dutton

<u>COMMENT #</u>	<u>RESPONSE</u>
19-1	See attached Record of Decision
19-2	Comment noted
19-3	Comment noted
19-4	Comment noted
19-5	Comment noted
19-6	Comment noted
19-7	Comment noted
19-8	Comment noted
19-9	Comment noted
19-10	Comment noted



IVC BARKER MUSEUM



Jay von Werlhof - Museum Director and Senior Archaeologist

Treala Ross - Assistant Museum Director

Jaime Sevín - Museum Exhibit Technician

Edward Collins - Site Recorder/Staff Archaeologist

George Miller - Curator of Paleontology

Marlin Childers - Curator of Paleanthropology

Shertlee von Werlhof - Environmental Studies Coordinator

February 15, 1984

Roger Zortman, Manager
 El Centro Resource Area
 Bureau of Land Management
 333 S. Waterman
 El Centro, California 92243

Re: Table Mountain

Dear Roger:

This is a letter of strong protest against the proposed plan to permit commercial impaction of the Table Mountain environs. The reason for the protest include:

- 1) Table Mountain is an area of sensitive and significant archeo sites.
- 2) Table Mountain is sacred to the Kumeyaay Indians, survivors of whom live in the mountain area.
- 3) There are alternate locations for such proposed developments.
- 4) The area is a nesting ground for endangered avefauna.

Should BLM deem these reasons insufficient, leading the Bureau to proceed with the plan, it can expect widespread and direct opposition from numerous politically active organizations. I have not enlisted such support, confident that the proposal, which does contravene existing BLM policies, will be stopped at an appropriate review level.

Sincerely,

Jay von Werlhof
 Director

JVW:rw

cc: SHPO

NAHC: Willie Pink

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:

Jay von Werlhof

COMMENT #

20-1

RESPONSE

Comment noted

Resources Building
1416 Ninth Street
95814

916/443-8356

GEORGE DEUKMEJIAN
GOVERNOR OF
CALIFORNIA



THE RESOURCES AGENCY OF CALIFORNIA
SACRAMENTO, CALIFORNIA

LETTER #21

Air Resources Board
California Coastal Commission
California Conservation Corps
Colorado River Board
Energy Resources Conservation
and Development Commission
Fish and Game Commission
Forest Practice Board
General Land Office
Habitat Conservation Board
Highway and Transportation
Board
Irrigation Facilities Board
Landmarks and Historic Sites
Board
Marine Resources Board
Northwest Forestry Experiment
Station
State Water Resources Control
Board

Department of Conservation
Department of Fish and Game
Department of Forestry
Department of Boating and Waterways
Department of Parks and Recreation
Department of Water Resources

Mr. Roger D. Zortman
Bureau of Land Management
333 South Waterman Avenue
El Centro, CA 92243

February 21, 1984

Dear Mr. Zortman:

The State has reviewed the draft environmental assessment, Wind Energy Development, Table Mountain Study Area, submitted through the Office of Planning and Research. Review was coordinated with the Energy and State Lands Commissions, Air Resources and Water Resources Control Boards, and the Departments of Conservation, Fish and Game, Forestry, Parks and Recreation, Water Resources, and Transportation.

21-1 The Department of Fish and Game (DFG) is opposed to project development unless adequate on-site or off-site mitigation and enhancement measures are provided to minimize or avoid impacts to the valuable wildlife resources of the area. DFG suggests that a field meeting be arranged to inspect the project site and to develop appropriate mitigation measures. Contact person for DFG is Fred Worthley, Regional Manager, 245 West Broadway, Long Beach, CA 90802.

21-2 Table Mountain is part of the Jacumba National Cooperative Land and Wildlife Management Area, under a cooperative agreement between BLM and DFG. The area supports a high diversity of wildlife species which use it for food and cover. Several gallinaceous guzzlers installed by DFG provide water for quail, mourning doves, cottontails, jackrabbits, and many species of nongame animals. Bighorn sheep have been sighted in the area, and golden eagles are known to nest and forage here. In addition, public hunting opportunities in the area could be jeopardized by development from the proposed wind park project.

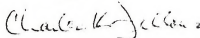
21-3 The Department of Parks and Recreation comments that Anza-Borrego Desert State Park surrounds the project site on three sides. Table Mountain is a significant landmark containing many cultural, natural, and aesthetic values. Native Americans consider the mountain to be sacred. Because of the significant resource values of the area, the proposed developments would be likely to have adverse impacts that would be difficult to mitigate. Increased access could result in unauthorized off-road vehicle use in Anza-Borrego Desert State Park. Increased access and construction activity could result in impacts on wildlife and increased opportunities for vandalism to archeological sites. Conversely, some existing use areas may be restricted. The Department also believes that it would be difficult to hide wind generating and transmission towers, especially since the best wind areas would probably be the most visible areas.

Page Two
R.D. Zortman

The Department recommends that these issues be fully evaluated and a plan formulated to minimize the project's impacts to these resources.

We appreciate having been given an opportunity to review this document and to comment on its contents.

Sincerely,



Jr Gordon F. Snow, Ph.D
Assistant Secretary for Resources

cc: Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

(SCH 84020101)

BUREAU OF LAND MANAGEMENT RESPONSE TO COMMENTS FROM:
Gordon Snow, The Resources Agency of California

COMMENT #

RESPONSE

21-1

Upon receipt of any site specific applications and applicant's biological assessment, the usefulness of a field review will be discussed further with CDF&G.

21-2

Comment noted

21-3

Comment noted

The following persons, groups and agencies will receive a copy of the Final Environmental Assessment and Record of Decision:

Loretta Allen
Harriet Allen
Pam Arviso
Dan Bell, SHPO
Stan Berryman
Ken Bosley
California Energy Commission
California Native Plant Society, San Diego Chapter
California State Clearing House - 10 copies
Coachella Valley Regional Library
John Cook
County of San Diego
 Board of Supervisors
 Dept. of Planning and Land Use
 Fish and Wildlife Advisory Committee
Frank Devore
Mike Donahue
Emily Durbin
Dennis Dutton
W.B. Edmondson
El Centro Public Library
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Robert Kink
David Fredrickson
Scott Fulmer
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Ken Hedges
James G. Hendrix
Duncan Hunter
Imperial County Library
Kumeyaay Historical Society
Virginia Landis
Capt. Greg Laret
Dr. Larry Leach
Katherine and Raymond Lobo
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Ron May
Harold McKinnie
Palm Springs Library Center
Tony Pinto
Lorraine Pritchett
Phillip Pryde
Joyce Redding
Renewable Energy Ventures
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San Diego Archaeological Society
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San Diego Chapter Sierra Club
San Diego State University Malcolm Love Library
San Diego County Library
San Diego Public Library
Sierra Club Legal Defense Fund, Inc.
Steve Shackley

Florence Shipek
Fern Southcott
Valacia Thacker
Jan Townsend
Bob Turner
Leonard Vander Bie
Westwind Consulting Services
Clyde Woods
Fred Worthley, Jr. - 2 copies
Nadine Zelenka

The following persons, groups and agencies will be sent a copy of the news release announcing the availability of the Final Environmental Assessment and Record of Decision:

Steve Apple
Lowell Bean
Mitchell Beauchamp
Gilmer Boggs
Vera Brown
Charles Bull
California Wilderness Coalition
Paul Chase & Associates
Bill Coleman
Dr. Paul Ezell
Susan Jeannette Ford
Dennis Gallegos
Gray, Cary, Ames & Frye
Susan Hector
Hendrix Electronics
James Kemp
Tom King
Steve Licata
Dan McCarthy
Richard McCain
Michael and Patricia McCoy
James Metivier
Dr. James Moriarity
Glen Olson
Pacific Coast Archaeological Society, Inc.
Anthony Pico
Linda Roth
Skip Ruland
San Diego Audubon Society
San Diego Fish and Game Association
Gwendolyn Sevella
Francis Shaw
U.S. Border Patrol
Jay von Werlhof
Harry Welte
Chris White

VII. PARTICIPATING STAFF

<u>Name</u>	<u>Responsibility</u>
Lynda Kastoll	Realty, Team Leader
Steve Nelson	Recreation, Visual, Wilderness
Sean Hagerty	Minerals
Steve Larson	Range, Botany
Lillian Olech	Wildlife
Pat Welch	Archaeology, Native American Values
Albert Baksh	Cartography
Becca Grijalva	Administration
Veronica Driscoll	Administration
Karen Gallimore	Administration

VIII. REFERENCES CITED

- Advisory Council on Historic Preservation, 1980. Treatment of Archaeological Properties. A Handbook. Prepared by the Advisory Council's 1979 Task Force on Archaeology.
- Baldridge, F. A., 1977. Raptor nesting survey of southern San Diego County, Spring 1977; with an analysis of impacts of powerlines. Unpublished report, USDI, BLM, Riverside, California, 41 pp.
- Barbour, Michael G., & Jack Major, 1977. Terrestrial Vegetation of California. John Wiley and Sons.
- Bean, Lowell, and Katherin Sive Saubel, 1972. Temalpakh: Cahuilla Indian Knowledge and Use of Plants. Malki Museum Press.
- Boyce, 1976. Record in files, USDI, BLM, Riverside, California.
- Brode, J., Biologist, California Dept. of Fish and Game, 1984. Personnel communication to Lillian Olech.
- California Energy Commission, 1981. Wind Energy-Investing in Our Energy Future.
- California Energy Commission, 1982. Model Ordinance for Small Wind Energy Conversion Systems.
- California Energy Commission, 1983. Wind Prospecting in San Diego County, California. Prepared by Meteorological Research, Inc. Contract 500-81-033.
- Chase, J. Smeaton, 1919. California Desert Trails. Houghton Mifflin Co., Boston.
- Cheatham, Norden H., and Robert J. Haller, 1975. An Annotated List of California Habitat Types. University of California Land and Water Reserve System. Unpublished.
- Clark, David O., 1979. An Analysis of Construction Effects on Vegetation and Soils of the Colorado Desert. Unpublished report. Department of Biology, Cal State Fullerton.
- Congress, United States, 1966. Public Law 89-665, 80 Stat. 915, 16 USC 470. The National Historic Preservation Act of 1966.
- Congress, United States, 1978. Public Law 95-341, 92 Stat. 469, 42 USC 1966. American Indian Religious Freedom Joint Resolution.

- Cook, John and Scott Fulmer, Eds., 1980. The archaeology and history of the McCain Valley study area, eastern San Diego County, California. A class I cultural resource inventory. Prepared by Archaeological Systems Management, Inc., for the Bureau of Land Management.
- Dunstan, T. C., J. H. Harper, and K. B. Phipps. Habitat use and hunting strategies of prairie falcons, red-tailed hawks, and golden eagles. Contract 52500-CT5-1013, USDI, BLM, Denver, Colorado.
- Fritts, T. H., H. L. Snell, and R. L. Martin, 1982. Anarbylus switacki Murphy; and addition to the herpetofauna of the United States with comments on relationships with Coleonyx. J. Herpetology 16 (1): 39-52.
- Hedges, Ken, 1976. Southern California rock art as shamanic art. In American Indian Rock Art, Vol. II, papers presented at the Second Annual Rock Art Symposium, pp. 126-138. El Paso Archaeological Society, Inc., El Paso, Texas.
- Jacques, Terri, 1980. Research-History. In the archaeology and history of the McCain Valley study area. John Cook and Scott Fulmer, editors. Prepared for the Bureau of Land Management.
- Johnson, Melissa, 1976. Archaeological inventory and assessment of corridor segments 46, 49 preferred southern route, Sun Desert Nuclear Project. San Diego State University, unpublished manuscript.
- Jorgensen, M. C., Naturalist, Anza-Borrego Desert State Park, 1981. Personal communication to Lillian Olech.
- Kumeyaay, 1983. Interview with Tony Pinto at Table Mountain, December 15, 1983.
- Kumeyaay, 1984. Letter from Tony Pinto, Chairman of the Cuyapaipe Reservation, to the El Centro Resource Area Office. Received January 16, 1984.
- Luomala, Katherine, 1978. Tipai and Spai. In Handbook of North American Indians, California Volume 8. Smithsonian Institution, Washington.
- Mason, J., Ranger, Bureau of Land Management, 1984. Personal communication to Lillian Olech.
- May, Ronald V. Research values in the Table Mountain area. Unpublished manuscript.

- May, Ronald V., 1976. Hwi-Nip-Shish: a settlement and land use pattern model for the Table Mountain complex near Jacumba, California. Unpublished manuscript.
- May, Ronald V., 1980a. Geologic and biologic determinants of the Table Mountain complex: the desert transition of the Jacumba Pass. Paper presented at the Society for California Archaeology annual meeting. Yosemite, California and in Pacific Coast Archaeological Society Quarterly 16(3): 53-63, Costa Mesa, California.
- May, Ronald V., 1980b. Research at Diamond Chain Rockshelter, a locus of Ha'a'weer (SDi-4296) in the Table Mountain area. Paper presented at the Society for California Archaeology data sharing meeting, Northridge, California.
- May, Ronald V., 1984. Letter to Roger Zortman. On file at El Centro Resource Area Office.
- May, Ronald V., 1984. Personal communication to Lillian Olech.
- McKinnie, H., Wildlife Biologist, California Dept. of Fish and Game. 1983. Personal communication to Lillian Olech.
- Olenдорff, R. R., A. D. Miller, and R. N. Lehman, 1981. Suggested Practices for Raptor Protection on Powerlines. Raptor Research Foundation, Inc., St. Paul, Minnesota.
- Powell, W. Warden, Lieutenant, California Dept. of Fish and Game, 1983. Personal communication to Lillian Olech.
- Russi, T., Wildlife Biologist, Bureau of Land Management, 1983. Personal communication to Lillian Olech.
- Shackley, Steve, 1983. Archaeological Investigations in the western Colorado Desert: a socioecological approach. Data recovery on the Mountain Springs (Jode) to Sand Hills Segment: Southwest Powerlink Project (Draft). Unpublished manuscript prepared by Wirth Environmental Services, San Diego, California
- Smith, James P., et al. (ed.), 1980. Inventory of Rare and Endangered Vascular Plants of California. California Native Plant Society, Special Publication #1.
- Strand, Rudolf (Compiler), 1962. Geologic map of California. San Diego-El Centro Sheet. Division of Mines and Geology, State of California.
- Spier, Leslie, 1923. Southern Diegueno Customs. University of California Publications in American Archaeology and Ethnology 26.

- U.S. Department of Agriculture, Soil Conservation Service and U.S. Forest Service, 1973. Soil Survey San Diego Area California.
- USDI, Bureau of Land Management, 1978. Records in Files, USDI, BLM, El Centro, California.
- USDI, Bureau of Land Management, 1980a. California Desert Conservation Area Plan. Vol. D, Appendix VII: Cultural Resources.
- USDI, Bureau of Land Management, 1980b. Area of Critical Environmental Concern (ACEC) policy and procedure guidelines.
- USDI, Bureau of Land Management, 1980. Eastern San Diego County Planning Unit Draft Environmental Impact Statement. BLM, Riverside, California.
- USDI, Bureau of Land Management, 1980. Sensitive Plant Inventory of the Eastern San Diego County Planning Unit. Unpublished report. BLM, El Centro, California.
- USDI, Bureau of Land Management, 1981. Eastern San Diego County Planning Unit Management Framework Plan. BLM, Riverside, California.
- USDI, Bureau of Land Management, 1982. BLM Policy on Conserving Rare, Threatened, Endangered, and Sensitive Plants on Public Lands in California. BLM Instruction Memorandum No. CA-83-49.
- USDI, Bureau of Land Management, 1982. Table Mountain District. National Register of Historic Places nomination form. Manuscript on file at El Centro Resource Area Office.
- USDI, Bureau of Land Management, 1983. McCain Valley Allotment Management Plan. Unpublished. BLM, El Centro, California.
- Vergne, S. M., 1983. San Diego Gas and Electric Company, Environmental Analyst. Personal communication to Lillian Olech.
- Waterman, T., 1910. The Religious Practices of the Diegueno Indians. University of California Publications in American Archaeology and Ethnology 4 (6): 271-358.
- Wirth Environmental Services*, 1981. Miguel to Mountain Springs Grode (Jode) archaeological survey report. Volumes 1, 2, and 3. Unpublished manuscript. *Formerly referred to as Wirth Associates, Inc.
- Wirth Environmental Services, 1982a. Jacumba Discontiguous Archaeological District. Determination of Eligibility, National Register of Historic Places. Manuscript on file at El Centro Resource Area Office.

- Wirth Environmental Services, 1982b. Jacumba Archaeological District Data recovery program. Unpublished manuscript.
- Woods, Clyde, 1980. Native American Resources. In APS/SDG&E Interconnection Project environmental study, Phase II corridor studies. Prepared by Wirth Environmental Services.
- Woods, Clyde, 1982. APS/SDG&E Interconnection Project Native American Cultural Resources. Prepared by Wirth Environmental Services.

IX. APPENDICES

Appendix A - BLM's VRM System

Appendix B - California Native Plant Society R-E-V-D Codes1

Appendix C - Native American Notification letter

THE BUREAU OF LAND MANAGEMENT'S VISUAL RESOURCE MANAGEMENT SYSTEM

The following overview of the Bureau's Visual Resource Management System is taken from a paper presented by Robert W. Ross, Jr., the BLM's chief Landscape Architect, at the National Conference on Applied Techniques for Analysis and Management of the Visual Resource held at Incline Village, Nevada, April 23-25, 1979.

Understanding and managing the visual aspects of alterations to the natural landscape are particularly important to the BLM, because many of the activities taking place on its lands involve some degree of alteration. Recent legislation, the Federal Land Policy and Management Act of 1976 (FLPMA), set basic policy for the BLM's management of public lands. The key requirements are contained in section 102(8), which states that:

"The public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use."

The Act, thus, makes protecting scenic and other environmental values an explicit criterion that must also be applied throughout the BLM's land management activities.

FLPMA also places new emphasis on the role of land use planning by requiring that resource management plans "give priority to the designation and protection of areas of critical environmental concern."

The criteria for identifying these areas are stated in the definition section 103(a):

".....area..... where special management attention is required...to protect and prevent irreparable damage to important historical, cultural, or scenic values, fish and wildlife

resources or other natural systems or processes or to protect life and safety from natural hazards."

The National Environmental Policy Act of 1969, which seeks to provide aesthetically pleasing surroundings for all Americans, calls for the development of procedures to ensure that presently unquantified environmental values are given appropriate consideration in decisionmaking.

It also requires, "utilization of a systematic, interdisciplinary approach, which will ensure the integrated use of...environmental design arts in planning and decisionmaking."

The Surface Mining Control and Reclamation Act of 1977 makes minimizing adverse effects on visual resources a requirement for all surface mining activities.

The Clean Air Act amendments of 1977 also establish the importance of scenic values in determining airshed classifications and managing air quality.

In conjunction with its land planning and management responsibilities, the BLM is committed to managing visual resources and concurrently, to minimizing the adverse visual impacts of land use practices on its lands. As a result, the BLM requires that visual resource considerations be included in all environmental assessments, in all land use planning decisions, and in the implication of all resource projects.

Because the scenic value of public lands varies, however, and because management

objectives also vary, it is not practical to provide a uniform level of protection to all the ELM lands. The ELM has, therefore, developed a system for evaluation visual resources and for determining what degree of protection, rehabilitation, or enhancement is desirable and possible. This Bureauwide system has been developed to provide an interdisciplinary approach to the visual resource management process. The system, which is integrated into the ELM procedures for "Multiple-Use Planning and Environmental Analysis" insures that principles of the environmental design arts are applied to all activities on the ELM land that may modify the landscape.

The ELM's Visual Resource Management (VRM) System is an analytical process that identifies, sets, and meets objectives for maintaining scenic values and visual quality.

The system is based on recent research that has produced ways of assessing aesthetic qualities of the landscape in objective, universally recognizable terms. What has been considered extremely subjective (aesthetic judgment, particularly in the landscape) was found to have identifiable consistent qualities which can be described and measured, and about which people with diverse opinions will tend to agree. Whatever the terrain (and whoever the observer), perception of visual quality in a landscape seems to be based on several common principles including:

Landscape character is, for the most part, determined by the four basic visual elements of FORM, LINE, COLOR, TEXTURE. Although all four elements are present in every landscape, they exert varying degrees of influence. The stronger the influences exerted by these elements, the more interesting the landscape.

The more visual variety in a landscape, the more aesthetically pleasing that landscape. Variety without harmony, however, is

unattractive, particularly in terms of manmade alterations (cultural modifications) that are made without care.

The ELM incorporates these and other principles in a broad program for managing visual resources.

The VRM program functions in these three ways:

First, the program initiates the inventory and evaluation of visual resources on all lands under the ELM jurisdiction (Inventory/Evaluation). Once inventoried and analyzed, these lands are given relative scenic value ratings. Action plans are then developed for improving or preserving the scenic values of each parcel.

Second, the VRM program responds when development is proposed on the ELM land, either by the Bureau itself (through its multiple-use planning activities), or by private parties. Proposed development is measured against VRM scenic quality classes through the Contrast Rating process (Environmental Assessment for Visual Resources).

Similarly, VRM standards and techniques can be used when proposed activities are still in the design stage to determine in advance, the visual impact of an activity and the extent to which mitigation measures will be required to make a project acceptable (Visual Resource Designs).

Third, the VRM program functions on a support level; through the development of graphic simulation techniques to model visual impacts, through monitoring actual visual impacts of new development activities, and through the publication of technical reports (such as the guidebooks in this series) that disseminate current information on the program (Support Elements/Monitoring and Compliance).

INVENTORY/EVALUATION

Devaluation of the visual quality of the landscape, the sensitivity of that landscape to change, and distance determine classes in the Visual Resource Management system. Although the details of the evaluation process itself is quite straightforward.

SCENIC QUALITY

Scenic quality is perhaps best described as the overall impression one retains after driving through, walking through, or flying over an area of land. When scenic quality is inventoried, an area is first divided into sub-units that appear generally homogenous in terms of land forms and vegetation. Each area is rated by seven key factors according to a consistent point system that allocates specific values to three levels of dominance for each factor.

The sum of the rating scores assigns each landscape to one of three Scenic Quality Classes: Class A = 19-33; Class B = 12-18; Class C = 0-11.

SENSITIVITY LEVELS

Although landscapes do have common elements that can be measured, there is still a subjective dimension to landscape aesthetics - every viewer brings to the landscape perceptions formed by individual influences: culture, visual training, familiarity with local geography, and personal values.

To measure regional and individual attitudes for inclusion in the evaluation of a landscape, visual sensitivity is determined, in two ways:

Use Volume - Travel through an area (by road, trail, river) and the use of that area (for recreation, camping, events) are tabulated and then assigned a high/medium/low rating

according to predetermined classifications.

User or Public Attitudes - Public groups are invited to workshops where they are familiarized with the landscape area, and then asked to respond to activities that will modify that landscape. The concern they express about proposed changes in scenic quality is rated as high, medium, or low.

A matrix then combines use volume and user attitudes in an overall Visual Sensitivity Rating of high, medium, or low.

DISTANCE ZONES:

The scenic quality of a landscape, user attitudes (and, therefore, the modifications acceptable or desirable) may be magnified or diminished by the visibility of the landscape from major viewing routes and key points. In the VRM system, a landscape scene may be divided into three basic "distance zones."

Foreground/Midleground - What is visible to an observer at a distance of 3 to 5 miles. At the outer boundary of this zone, the texture and form of an individual plant are no longer seen.

Background - What is visible to an observer at a distance of 3-5 to 15 miles, excluding objects perceived only by form or outline. Vegetation included in this zone should be visible, at least, 1 as patterns of light and dark.

Seldom-Seen - What is visible to an observer beyond a distance of 15 miles or is obscured from view at closer range.

Atmospheric conditions may modify the perception of each distance zone. Also where several routes exist, what is foreground from one route may be background from another. (Usually, the closer designation is used.)

For small projects, infield photographic assessment of distance zones is usually sufficient. For large projects, however, or projects that require evaluation from many key viewpoints, an alternative method for generating distance zone data is a computer graphic modeling technique such as the VIEWIT system developed by the USFS.

MANAGEMENT CLASSES

Visual resource Management Classes describe the different degrees of modification allowed in the basic elements of the landscape. In practice, the Management Class designation is derived from an overlay/matrix evaluation technique that identifies areas with similar combinations of factors and then assigns them to a VRM class according to predetermined criteria.

The resulting map of contiguous areas sharing the same VRM class is an important planning document for all BLM land-use decisions. It is used in the BLM's multiple-use planning process, then becomes the basis for developing visual resource management objectives, and is also used to assess the visual impact of proposed development activities.

Of the six classes, one is the Areas of Critical Environmental Concern (ACEC) and the remaining five are the established five classes: ACEC's and the remaining five are the established five classes: ACEC's are lands of high scenic value and relative scarcity.

Class I. This class provides primarily for natural ecological changes; however, it does not preclude very limited management activity. Any contrast created within the characteristic environment must not attract attention. It is applied to wilderness areas, some natural areas, wild portions of the wild and scenic rivers, and other similar situations where management activities are to be restricted.

Class II. Changes in any of the basic elements (form, line, color, texture) caused by a management activity should not be evident in the characteristic landscape. A contrast may be seen, but should not attract attention.

Class III. Contrasts to the basic elements (form, line, color, texture) caused by a management activity may be evident and begin to attract attention in the characteristic landscape. However, the changes should remain subordinate to the existing characteristic landscape.

Class IV. Contrasts may attract attention and be a dominant feature of the landscape in terms of scale; however, the change should repeat the basic elements (form, line, color, texture) inherent in the characteristic landscape.

Class V. Change is needed, or change may add acceptable visual variety to an area. This class applies to areas where the naturalistic character has been disturbed to a point where rehabilitation is needed to bring it back into character with the surrounding landscape. This class would apply to areas identified in the scenic evaluation where the quality class has been reduced because of unacceptable cultural modification. The contrast is inharmonious with the characteristic landscape. It may also be applied to areas that have the potential for enhancement, i.e., add acceptable visual variety to an area/site.

It should be considered an interim or shortterm classification until one of the other VRM class objectives can be reached through rehabilitation or enhancement. The desired visual resource management class should be identified.

CONTRAST RATING SYSTEM

A measure of the ease with which a proposed activity can be inserted into a landscape is the contrast of that activity with the basic elements of the landscape. Assessing the

contrast of a proposed project against the form, line, color, and texture of the existing setting is a simple, but effective demonstration of the modifications that may be required to meet a desired landscape quality.

To accomplish this, the EIM Contrast Rating procedure is applied to all proposed development and management activities. This procedure first breaks a landscape down into its major features (land and water, vegetation, structures) and each feature, in turn into its basic elements (form, line, color, texture). Assessing the predicted contrast of a proposed activity against each feature in the landscape readily indicates the anticipated severity of visual impact.

In the Contrast Rating system, the ease of detecting contrast in the basic elements ranges from the highest rated (form) to the lowest rated (texture). By assessing degrees of contrast in each of the major features, a multiplier can be derived that indicates intensity of contrast.

More specifically, there are acceptable maximum ratings for each element, and any one feature for each visual resource management class.

Since each activity proposed for EIM land must pass through this evaluation, it has the potential to be useful in order to identify and mitigate extreme contrasts in the planning/design stage.

Appendix B

California Native Plant Society R-E-V-D Codes¹

In an attempt to increase the refinement of assigning plants to categories, CNPS developed a scheme that involved combining four coordinate, related elements that could be scored independently. These four components are:

rarity, which addresses the extent of the plant, both in terms of numbers of individuals and the nature and extent of distribution;

endangerment, which embodies the perception of the plant's being threatened with extinction, for whatever reason;

vigor, which speaks to the number of individuals through recent time; and

distribution, which focuses on the general range of the plant.

Together these four elements form the R-E-V-D Code. Each element in the code is divided into three classes or degrees of concern represented by the number 1, 2, or 3. In each case, the higher the number the more critical is the concern. The system is summarized as follows:

R (Rarity)

- 1 - rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
- 2 - occurrence confined to several populations or to one extended population.
- 3 - occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

E (Endangerment)

- 1 - not endangered
- 2 - endangered in a portion of its range
- 3 - endangered throughout its range

V (Vigor)

- 1 - increasing or stable in number
- 2 - declining in number
- 3 - approaching extinction or extirpation

D (Distribution)

- 1 - more or less widespread outside California
- 2 - rare outside California
- 3 - endemic to California

1. Smith, 1980. pV.



IN REPLY
REFER TO:

2800 8100
(C-067.29)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
El Centro Resource Area
333 South Waterman Avenue
El Centro, California 92243

Dear

The Bureau is considering the possibility of permitting wind energy development in the Table Mountain area of eastern San Diego County (see enclosed map). Facilities associated with any wind farm include access roads, distribution transmission lines, wind towers, and related structures. Projected impacts stem largely from road building and construction activities. The effect of such an undertaking upon Native American concerns is difficult to evaluate. Existing information dealing with such values is limited.

El Centro Resource Area staff will prepare an Environmental Assessment to examine developmental impacts and their effect on the environment. Your input is requested in order to assist preparation of the document. If necessary, a field visit can be arranged to visit the study area. Please contact either Lynda Kastoll or Pat Welch by December 16, 1983 if you require additional information or would like a copy of this letter mailed to another individual. Their telephone number is (619) 352-5842.

Sincerely,

Roger D. Zortman
Area Manager

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